Caterpillar Inc | Alliance Bernstein 2022 38th Annual Strategic Decisions Fireside Chat with Jim Umpleby | June 1, 2022

Chad Dillard:

Hi. Good morning, everyone. My name is Chad Dillard. I am the lead analyst here at Bernstein for the U.S. machinery sector, and I'm really pleased to have Caterpillar here, and joining me from Caterpillar is Ryan Fiedler, the director of investor relations, and Jim Umpleby, chairman and CEO. We're going to start off with Ryan reading off some disclosures, and then we'll move into a quick presentation by Jim, and then we'll dive right into a full-on Q&A session. Without further ado, let me pass it off to Ryan.

Ryan Fiedler:

Thanks, Chad. And really appreciate everyone being here today, both in person and watching virtually. I'm Ryan Fiedler, head of investor relations at Caterpillar. I'm just going to hit a couple key items before we get started here, today. First, we may make forward-looking statements, and they are subject to risks and uncertainties. For a full list of risks and uncertainties that could cause our actual results to vary materially from any forward-looking statements we make today, please refer to our most recent SEC filings, our 10K for 2021, and our most recent 10Q for the first quarter. Second, we'll be posting the slides on investors.caterpillar.com. With that, I'll turn it back over to Chad and Jim, our chairman and CEO of Caterpillar.

Chad Dillard:

Over to you, Jim.

Jim Umpleby:

Good morning, everyone. Thank you for joining us. Certainly, appreciate your interest. I'm going to run through, very quickly, a few slides to set the stage, and then we'll open it up to the Q&A. We introduced a strategy for profitable growth back in 2017 based on three main elements. One is operational excellence, which includes safety, quality, Lean, and a competitive and flexible cost structure. We know we can't control market dynamics, but we certainly can control the way we perform at those various sales levels. Expanded offerings includes our ability to develop and introduce machines that'll allow us to meet various customer price point expectations. Previously, Caterpillar traditionally has been known for having the highest quality, most productive piece of equipment, and we still have the highest quality, but now we've introduced a line of products that allows us to capture customers that we call lifecycle value customers, who are more interested in first cost, then productivity. And then last is services, which is a great opportunity for us to profitably grow our company, which I'll talk more about later. And, of course, it's all towards the idea of profitably growing our company.

Jim Umpleby:

Just a word about that services target. In 2019, we put out a target to double services from $14 billion to $28 billion in 2026, and we even told our investors at our recent investor day that we're increasingly confident in our ability to meet that target for a whole variety of reasons that I'm sure I'll talk about

during our discussion, here. At our investor day a couple of weeks ago, one of the things we did is, we added sustainability as one of our core focus areas, because we do believe that represents an outstanding opportunity for us to profitably grow our company. The energy transition is expanding Caterpillar's total addressable market, that and growing global energy demand, as well. Stop and think about electric vehicles, the number of autos that are being put on the road, and the other ways that our economies are being electrified. That represents a great opportunity for our mining business. A typical EV takes six times the minerals as a conventional automobile, and again, we make the mining equipment that allows our customers to produce those commodities that are required for the energy transition. That growing global energy demand also represents an opportunity for us, including things like the increased interest in liquified natural gas, or LNG, because Caterpillar plays across a wide portion of that natural gas value chain. As more renewables are added to the grid, that creates some grid reliability issues. That represents an opportunity for us to sell more gas turbine generator sets and reciprocating engine generator sets to help provide that grid stability, and our gas turbines and recip. engines have the ability to burn a wide variety of fuels: natural gas, biofuels, 100% hydrogen.

Jim Umpleby:

That's also an opportunity, and also infrastructure. You stop and think about the investments that need to be made, either as a result of the energy transition, or just the infrastructure bill, that represents an opportunity for CAT as well, and it's lots of expanding service opportunities that I'm sure we'll talk about. Again, I won't read this whole chart to you, but we do believe that our total addressable market is increasing for the reasons I've explained, primarily the energy transition and growing global energy demand, and it provides an opportunity for us to grow original equipment and services across our portfolio. And, with that, we'll open it up to your questions, Chad.

Chad Dillard:

Sounds good. Jim, I want to start off just with some near-term questions, and then we'll go into more of the longer-term strategic questions. But, over the last several weeks, there's been a growing concern about potential slow down. Recession's been thrown around. I just want to ask you directly, are you seeing any indications of activity in your core markets starting to slow, anything signaling a recession ahead?

Jim Umpleby:

We haven't seen that. Our demand still remains quite strong. Last year, in 2021, we increased our sales by more than 20%, and we had told our investors that our sales would've been even higher if not for supply chain constraints. And, in the first quarter of this year, our sales were up double digits. And again, we told investors that our sales would've been even higher if not for those supply chain constraints. We haven't seen signs of slowdown in our markets. The vast majority of the markets we serve are still quite strong.

Jim Umpleby:

And our challenge, at the moment, quite frankly, is supply chain, our ability to supply enough equipment to meet all the demand that's out there. We haven't seen that slow down. The one area where we have talked about with our investors is in China. We had two extraordinarily strong years in 2020 and 2021, and in China, that market for Caterpillar, is primarily hydraulic excavators 10 ton and above. And we've told our investors that we believe that the market this year will be slightly less than it was in 2019, but

we've known that for a while. That's not that new, but in the other markets that we serve, demand continues to be quite strong, and we have not seen a slowdown in demand.

Chad Dillard:

Okay. And so, let's just hypothesize here. If we do go into recession, are there any structural changes that you've made in your business that you'd potentially call out that could actually make the cyclical amplitude lesser, or even the trough earnings level higher?

Jim Umpleby:

We introduced some Investor Day targets back in 2017, and then we upped the ante in 2019. And we know, again, we can't control the market, but what we have said in our 2019 Investor Day is that we would achieve adjusted operating profit margins 300 to 600 basis points above what we did between 2010 and 2016 at similar levels of sales. And frankly, there was a bit of skepticism when we rolled those out. You said, "Okay, you've demonstrated on the way up, but can you really do it on the way down?" And in 2020, unfortunately, we had a COVID-induced downturn, where our top line fell 20% in one year. Despite that 20% decline in sales, we still met our operating margin targets. I believe we have structurally changed our company, and for the last five years, since we introduced our new strategy, we have met our investor day targets for improved adjusted operating profit margin every year, including a year when we had a 20% downturn. We do believe we have the ability to perform better during a downturn.

Chad Dillard:

Okay. At the Analyst Day a few weeks ago, you gave a guidance that implied incremental margins in the 30% to 40% range. Do you think you're going to be able to capture enough pricing this year to get you back on track to hitting your targets as we go into 2023?

Jim Umpleby:

And the way we look at this is, we really don't talk about incremental margins quarter-to-quarter, or year-to-year. Again, what we talk about is those adjusted operating profit margin targets, 300 to 600 basis points based on that reference period of 2010 to 2016. We believe we will meet those targets this year, and we fully intend to meet them moving forward. Having said that, we also... Again, we see that our total addressable market is increasing. We know we have to make increased investments in some products, but we believe, based on everything we see... Again, our intent is to invest more. Our total addressable market is increasing. We'll maintain our margins, meet those margin targets, which should increase our free cash flow as related to the top line.

Chad Dillard:

During the Analyst Day, you talk a lot about how CAT will operate in the energy transition. And so, my question is more about, what is the correct revenue growth algorithm? Because if you look back to the early 2000s to the 2010s, Caterpillar grew at high single-digit levels. It's a little bit more towards mid-singles most recently. But as we embark on this transition, how should we think about your revenue growth potential going forward?

Jim Umpleby:

Yeah. I'll refrain from making an absolute top-line prediction, here. That wouldn't be a wise thing to do. But I will talk about some of the dynamics that are driving what we believe, again, is this increase in our

total addressable market. We talked about the energy transition already, how the fact that our customers need to help the world produce more commodities as the world electrifies, more minerals for EVs. Again, average EV takes six times as many minerals as a conventional car. Think about all the other elements of the energy transition, what's going on with LNG infrastructure. We do believe there is a significant opportunity for our market to grow, and we're certainly committed to continue to invest to ensure that we remain competitive through that. I'm reluctant to give you a number, but again, regardless of exactly how the energy transition plays out, we believe we're in a very good position to benefit.

Jim Umpleby:

If you look at the IEA sustainable scenario, the stated policy scenario, total energy demand is expected to grow 16% between now and 2040. Oil is expected to increase. Natural gas is expected to increase even more than that, and renewables are expected to more than double. We can all have our own opinions as to exactly how that will play out. Will renewables go up even faster? Will they be a bit slower? Will natural gas be a bit lower than anticipated? Will it be higher? The good news is that, regardless of how that plays out, Caterpillar is well-positioned to benefit from those changes that'll take place. Again, our mining business, and our recip. engines and gas turbines, benefit from more renewables, and more EVs. Again, the increased interest in LNG drives more natural gas production in transmission. We're very well-positioned for that, because we do play across a wide portion of that natural gas value chain.

Jim Umpleby:

Our engines are used for natural gas drilling. And now, as opposed to flaring, we have the ability to burn field gas and use batteries to reduce our oil and gas customers' carbon footprint. We have a well servicing solution now that goes from the trailer to the wellhead because of the acquisitions we've made, and the internal investments we've made, as well. And we're helping our customers, again, reduce their carbon footprint there, as well. Our Solar gas turbines drive solar centrifugal natural gas compressors to compress gas down the pipeline. Again, we play across a wide portion of that value chain. Again, more renewables, that's good for us as well. We feel we're very well-positioned, regardless of one's opinion as to exactly what the percentage is that will be here, and how quickly this will play out. We believe we're well-positioned to benefit.

Chad Dillard:

Actually, I should have mentioned this at the beginning, but if you have any questions, please feel free to log into Pigeonhole, ask your question, and then I'll be more than happy to ask Jim. Just carrying on, within resource industries, the energy transition is actually somewhat of a double-edged sword. On one hand, you've got coal demand, which will likely sunset, while mineral demand will probably increase driven by EVs, as you pointed out. Can you talk about how CAT plans to navigate this transition and to what extent will it be a net positive for CAT?

Jim Umpleby:

Yeah. And some of it I've already talked about, again regardless of how the energy transition plays out were well positioned to benefit. Coal represents three to five percent of our total sales. So it's relatively minor in the bigger scheme of things. And again, we're well positioned to benefit from increased electrification, renewables, all the things that have to be ... the minerals that have to be mined. But also,

we're well positioned to help our oil and gas customers reduce their carbon footprint as they produce more oil and gas.

Chad Dillard:

Right. Okay. So as your mining customers decarbonize, how does this change the energy demand profile at the mine site? And then, to what extent does this transition expand your E&T business opportunity in mining? And maybe you can talk a little bit about how CAT's products are differentiated to support that.

Jim Umpleby:

Yeah. There's been a number of announcements by our major mining customers as to how we are working with them to help them meet their sustainability objectives. We are investing in new technologies, we're investing in batteries, we're investing in hydrogen, we're doing a whole variety of things to help our customers achieve those objectives. At the same time, we believe we're uniquely positioned among our mining equipment competitors because of our energy and transportation portfolio. We have gas turbines, we have recip. generator sets. We have distributed power capabilities that when we're working with our customers to figure out how, as an example for electrification, how the mine site gets electrified. One of the things that I think a lot of people don't have a good sense of is how different an electrified piece of construction or mining equipment is from, let's say a car, an automobile.

Jim Umpleby:

With a big mining truck, you fill the tank with diesel fuel and that mining truck will run 24 hours a day before you have to fill it again. With a battery-powered machine, it'll run about two hours. So, one of the things that has to be put into our mining customers' planning process as they electrify their mine sites, is figuring out how their mining trucks will get recharged. If it's hydrogen, how that will work. So, it's quite complex. And we do believe, again, because of our power management, our power distribution, the fact that we have microgrids, the fact that we have reciprocating engines, we have gas turbines, that we are uniquely positioned to help our mining customers electrify their sites. Maybe just another word of kind of about electrification. The other thing to think about is, as we work with our customers and we are investing, we will have battery-powered machines.

Jim Umpleby:

We already have a battery-powered underground loader that is being operated by a customer. So again, we're already starting to introduce these products. But stop and think about a hydraulic excavator that's in the middle of nowhere, regardless of where it is. It's building a highway, there's no grid, there's no infrastructure. It's very isolated and it's got a battery in it. How does that work? So, when the battery goes dead at two o'clock in the afternoon, what is the solution? There's no grid, so do you fire up a diesel-powered gen set to fast charge it? Which probably reduces the whole...it eliminates the benefit of having a battery-powered machine. Do you have an extra excavator? Do you try to change the batteries? What is it you do? So, there's a lot of complication that goes into this.

Jim Umpleby:

I believe that the adoption of alternative drivetrains in construction and mining equipment will vary by application, and it'll vary by geography. So, one can very readily see a situation relatively quickly. Within a decade, let's say in the island of Manhattan, that for construction equipment that digs...paving equipment that digs up the street, they'll all be battery-powered. That's easy to visualize and easy to

understand technically how that would occur. More challenging again, to build that highway in the middle of nowhere where there's nothing, there's no infrastructure. How does that work?

Jim Umpleby:

So again, we'll have to, I believe the... and also what happens in Manhattan and what happens in the middle of a very remote place in Africa or Australia, or even the United States. You know, I think it'll vary. So again, we're committed to working with our customers to figure this out. We're investing in the technologies, but a lot of times people will make a one-to-one analogy between automobiles and construction equipment. It is quite different, and we'll have to work our way through that. For the smaller machines, much easier to envision how that would work. For very large pieces of equipment that operate in remote locations. It'll be more complicated.

Chad Dillard:

Okay. So, you spent some time talking about grid modernization at the Analyst Day. I was hoping you could maybe expand on that. How does grid modernization expand your addressable market?

Jim Umpleby:

So as more renewables get added to the grid, it has created stability issues and more in some geographic areas than others. And we're already starting to see that play its way out. And if one looks at the aspirations by governments to add even more renewables, arguably, that will increase the opportunity for us. Because we do build, again, as I mentioned earlier, we have reciprocating engine-powered generator sets and gas turbine-powered generator sets that can be installed in the grid to provide that grid stability. And those engines have the ability to burn a whole variety of fuels. They can burn natural gas, they can burn biofuels. We've demonstrated both in our gas turbines and our reciprocating engines, the ability to burn 100% hydrogen. So as this energy transition occurs, we have the ability to provide these generator sets, both gas turbine and recip. engines, that will help provide that grid stability.

Jim Umpleby:

So that's what we really see when we talk about grid modernization and grid stability, that's what we really mean. We've had the ability to burn hydrogen in our gas turbines...we started that in the eighties, as an example.

Jim Umpleby:

Maybe just one sustainability example there in China, we've sold a number of gas turbines that burn coke oven gas. So traditionally coke oven gas is a natural byproduct of steel making, and traditionally coke oven gas was vented to the atmosphere, and it has a very detrimental greenhouse gas effect. So, we were able to modify our gas turbines to burn that coke oven gas to produce electricity. So, it has a double environmental benefit. It prevents the coke oven gas from being vented to the atmosphere, but it also negates the ability, the need for that electricity to be generated in another way, because we burn in our gas turbine and produce electricity. So, this is an example of one of the many sustainability examples that we have, given that energy and transportation portfolio. And we're quite excited about the opportunity to move forward.

Chad Dillard:

So just moving over to China. So, with the lockdowns we're seeing in the country, how much visibility do you have into your large excavator market? And maybe you can just remind us about just the revenue exposure that you have there.

Jim Umpleby:

So again, I mentioned that we expect China in this year to be slightly less than 2019 levels. And again, 2020 and 2021, were extraordinarily strong. So, we do believe we're well positioned in China. It's certainly still an important market to us, but it is softening a bit. And it's for a whole variety of reasons, it isn't all just lockdown. It's...part of it's the economic cycle, part of it's how much equipment was bought over the last two years, and there's kind of a natural flow there as to how that works. Now, it remains to be seen of course, much of what happens in China is driven by, of course, government policy. We see some stimulus coming, but again, we don't see ...our view currently is that market will be slightly below 2019 levels.

Chad Dillard:

So, at the Analyst Day CAT talk about scaling its autonomous mining capabilities going from offering a 25 haul truck down to 12 haul trucks. By how much does this expand your market? And how does this improve the range of applications that can use this sort of technology?

Jim Umpleby:

Thanks, Chad. Well, this just may be a level set for everyone. We've been on the autonomy journey for quite some time. We've been investing in this technology for more than 20 years. And our autonomous mining trucks have driven a hundred million miles. It's pretty incredible, much more than any car manufacturer by a long shot. One of the things that had limited the adoption of autonomous mining trucks in the past was the mine had to be a certain size for it to make sense. Just given the capital investment required in the infrastructure and the mine site to have that penciled out. And so, what we've been able to do and working with our customers and continuing to invest, we've been able to bring down from about 25 trucks to now, we're saying 10 to 15 trucks. If a mine has 10 to 15 trucks, it can make sense to have an autonomous investment, to have those products run autonomously. And we've had customers publicly say that they achieved a 30% productivity increase versus their best manned sites. You say, well, why is that? Well, one of the things is that autonomous mining truck doesn't make a mistake. Autonomous mining truck, it never gets tired. It doesn't need a break. You don't have to fly someone into a remote mine site. You don't have to put them up, you don't have to feed them. It's always repeatable. And, and one of the things we've also been able to do is take that autonomous technology and put it into other products at the mine site as well.

Jim Umpleby:

So, as an example, we have one of our large mining customers, the first autonomous water truck is operating. We have drills, we have dozers, and we have semi-autonomous products as well. So, a lot of that is starting to come into other products and parts across our portfolio, just example of semi-autonomous now and also remote control.

Jim Umpleby:

We have the ability now, we've demonstrated this, where an operator, you know, Chad, you could sit here in your chair, in New York, and control machines anywhere in the world. And you have the ability to control autonomously dozers. You can control up to five dozers, because they are in a semi-

autonomous mode, in different parts of the world. Think what a game changer that is for our customers, just particularly today with the labor shortages that we have. The ability to have one operator operating in one place and remotely operating multiple machines. So, we're very excited about this opportunity and what it's going to do to increase the productivity of our customers and how much more flexibility it gives them over time.

Chad Dillard:

Okay. So just sticking with autonomy. The overarching question for me is just how does this have the potential to change the business model for CAT? So, I'm thinking about the replacement, demand cadence, parts intensity, service opportunity and is there anything else you would call out which could structurally change kind of how CAT goes to market?

Jim Umpleby:

Well firstly, we believe, we feel pretty strongly that we have the best mouse trap in the industry. We feel very good about our autonomous capabilities, and I believe that our customers are voting with their dollars just in terms of how many projects that we're capturing. And autonomy is not only for new trucks, but it's also for retrofit as well. So, we've gone into existing sites and put in autonomous capability as a retrofit.

Jim Umpleby:

In terms of the other things that go around that, typically when we sell on autonomous truck, there's a hardware element, there's a software element, there's a recurring license element. But one of the things that it really allows us to do is to work more closely with our customers. When we sell an autonomous solution, Caterpillar employees are typically at the mine site working with a customer.

Jim Umpleby:

And that allows us to become much more of a partner with our customers to make them successful. So, they have them embedded, sitting there and if we do our jobs right, and we provide that incremental value, we make our customers more successful. That positions us very well for the next time a purchasing decision is made for new trucks. It positions us very well for service opportunities as well, because our employees are there again, helping our customers avoid unplanned downtime, being proactive about repairs, they can help utilize our AI tools to help them as well. So again, a lot of opportunity here that we're quite excited about. It really is, it really truly is a game changer.

Chad Dillard:

So, I'm actually going to take some questions from online. And just a reminder, if you'd like to have your question asked, please log on to Pigeonhole and back it out. Are you seeing improvement stability or degradation in the supply chain? And what actions are you taking to reorient the supply chain to alleviate any of those challenges?

Jim Umpleby:

Yeah, it's a very good and topical question. We haven't seen a degradation, nor have we seen an improvement in our supply chain situation. Semiconductors continue to be a challenge, with other components, we will resolve one issue then one will pop up some other place. Again, hasn’t gotten materially worse, hasn't gotten materially better.

Jim Umpleby:

Having said that, certainly we're working to put more resilience in our supply chain, everything from dual-sourcing to thinking about where we source. We're a global manufacturing company, so we manufacture in many different parts of the world. We're working to ensure that we have multiple sources in various places, hopefully close to where we build the end product. But again, I think this lesson over the last few years has taught us the importance of resiliency. Cost is so important, but resiliency is there as well.

Jim Umpleby:

Geopolitical tensions, just distance, port issues, issues with transportation, I think it's let all manufacturing companies just step back and think about how they want to do this. And certainly, this is not a situation where you flip a switch, and it changes overnight. We've already started to make some changes, but this will be something that will evolve for some time as we think about, again, resiliency as being very important part of the equation.

Chad Dillard:

Next question for you, as China slowly reopens, how do you expect the cadence of reopening to play out? And are you starting to see any evidence of this flowing through your results, such as your order book?

Jim Umpleby:

Yeah. Again, there's a lot of dynamics here. Again, when you think about our business, we just don't think about shutdowns, we also just think about the market dynamics of the last few years and the fact that our demand was extraordinarily strong in 2020 and 2021. Again, what we see is that total industry, 10-ton hydraulic excavators and above, being slightly below 2019 levels, and we still expect that to be the case. Again, not a change from where we see it as a result of what's happening with COVID.

Chad Dillard:

Okay. And then can you talk about just CAT's approach to succession planning?

Jim Umpleby:

Sure. That's a loaded question. CAT's board of directors takes their succession planning responsibilities very seriously, it's something the board is continually focused on. The board, again at every board meeting, has that conversation both with the CEO and without the CEO. We look at talent within all levels of the organization. We believe that we have a strong bench strength of executives who are working to continually enhance the capabilities and experience of those executives and looking one level down and two levels below that, so it isn't just for the next CEO succession, but it's for the one after that, and the one after that, looking at talent in all levels of the organization. Obviously, a big focus on diversity as well, as we work to advance our diversity objectives. But again, something the board's very focused on and it's a big part of their job.

Chad Dillard:

Okay. Can you talk about CAT's role in lowering the carbon footprint of oil and gas extraction? And one thing I'm curious about, the customers that you serve in that industry, would you characterize it more as a push or more as a pull?

Jim Umpleby:

Yeah, it's really become a pull. It's transitioning from push to pull. Our oil and gas customers are very focused on reducing their carbon footprint because their customers are really focused on that issue as well. It's flowing its way through the supply chain.

Jim Umpleby:

And as I mentioned earlier, we've made a number of both organic investments in our capabilities, as well as investments, which has allowed us to help lower our customers oil, gas, and carbon footprint. Many examples, I mean, Solar turbines. One of our divisions has a methane abatement system, which they can sell to customers. We've introduced what we call a DGB, or a dynamic gas blending engine, which allows the customer to substitute up to 85% of their diesel fuel with natural gas. And then it can burn field gas, which reduces their carbon footprint and also reduces the cost for that customer of trucking in that diesel fuel. And in that dynamic gas blending engine now we've demonstrated the use of 10% hydrogen, which can further reduce a customer's carbon footprint.

Jim Umpleby:

We bought a company called Carbon Point Technologies, which allows us to help our customers with capturing sequestration as well, CO2. We have e-frac. What many customers are starting to do is either using field gas to run a gas-powered reciprocating generator set, or a gas-powered turbine, and then that drives an electric motor, which drives a frack pump. And through the purchase of WeirSPM that we made a few years ago, that was a very good timing for that acquisition, that has given us an electric motor driven pump, which facilitates that electric drive solution. We've done a whole variety of things to help reduce customer's carbon footprint.

Jim Umpleby:

And one of the things we've also done is we've developed control capabilities that allow our customers at well service sites to run much more efficiently. It used to be that many operators would operate their engines at... It's kind of like having a Ferrari and driving it to work in first gear. Now with the controls algorithms and the systems that we put in place, we help our customers run at the right speeds, which allows them to be more efficient, which burns less fuel, which puts less emission into the air.

Jim Umpleby:

I could talk for an hour about this. We have battery powered solutions as well. One of the things that we have with certain solutions we have in oil and gas is we'll combine, let's say, a gas-powered gen set with a battery solution as well. That also helps reduce customers carbon footprint because it just gives them much more operational flexibility. There's a whole variety of things that we're doing, and I think we're just scratching the surface, but clearly, we've seen this go from a push to a pull. There's a lot of interest by many of our customers in these technologies. We're very excited.

Chad Dillard:

I want to ask you a little bit about your electrification strategy, and most directly, how do you think about what you need to own versus outsource, and why?

Jim Umpleby:

As is the case with all products, We look at each situation on an individual basis, and this is always the case with our traditional product line, there are certain things that we do ourselves. There are certain things that we use suppliers for. There are certain things that we use partners for, and electrification will be no different than that.

Jim Umpleby:

I doubt that we'll make the battery sell themselves. I think we'll take advantage of other scale and technical capability as chemistry changes there. But in terms of between the battery cells and a battery pack and a machine, we'll play at the right place in that value chain. And we're still working some of that out, but one of the things that Caterpillar has demonstrated the ability to do quite well is to be a good integrator.

Jim Umpleby:

One of the reasons that makes … that we're more competitive in a variety of our products is our ability to integrate across the system. That's something we're very focused on. Again, don't expect that we'll build those battery cells, but again, we'll be involved in the integration and the packaging of those cells, and we'll figure out exactly where we're going to play in that value chain and we're starting to do some things there, but don't want to release anything too soon here.

Chad Dillard:

Sounds good. Just the last question on the electrification theme, what's the roadmap? Maybe you can kind of lay out in terms of your product, role and expectations, how do you think about the sequencing? What goes first? What comes a little bit later? What's the timing?

Jim Umpleby:

As I mentioned earlier, we already have an electric underground loader that's operating in underground mining applications, and that's a fantastic application for an electric drive machine. If you stop and think about it, underground, if you have a diesel engine in a machine, then you have to worry about ventilation in the mine. If it's electric powered, all those problems go away. That product has already been introduced and is already in operation, and we're very pleased at that.

Jim Umpleby:

We are working with our mining customers again, because they have very ambitious objectives and we're committed to help them succeed. One of the orders that we received that's been public is from a company called Nouveau Monde Graphite in Canada, where their license to operate is based upon their ability to have an all-electric mine operating, I believe the year is 2027, it's close to that, where they need to have an all-electric mine. And there's hydropowers in Canada, there's hydropower available in the area, so that really truly will be very renewable. And they're making graphite, that'll go into EVs, right? It's a fantastic application.

Jim Umpleby:

Again, we'll have mining equipment for them and for our other mining customers as well. Smaller equipment is, again, I think there'll be more customer pull for that first, but we have a variety of products where we've identified, we'll have battery powered machines, and we have dates and we're driving towards those. Again, it's a combination of kind of what makes sense from a technical

perspective to do first, but also customer pull. Where we see that customer pull, we will have the products ready when the customers need them.

Jim Umpleby:

And I believe the adoption rate, again, of those various drive turn technologies will vary by application and by geographic area. And in certain areas I suspect we'll continue to sell diesel engines for quite some time, certain applications, certain geographic areas. In certain geographic areas one can see, again, an urban environment, place in Western Europe, certain places in the U.S., Australia, pretty quickly governments are going to regulate that all machines will probably be battery powered in the early stages. And again, we're working on hydrogen as well. My sense is that's a bit farther out. Hydrogen's a bit farther out than batteries, at least in the near term.

Chad Dillard:

Okay. Just moving on to the service part of the conversation, back in 2019, you guys announced a target, I believe it's $28 billion by 2026. And we reconvened for the Analyst Day sounded like you were even more confident that you'd be able to reach those goals. What gives you that confidence? And again, if you can maybe lay out some data points that support that conviction.

Jim Umpleby:

Certainly. When we established that goal to double services between 2016 and 2026, we did say that would not be linear, it would be a bit back end loaded, because we knew we needed to make investments to make that occur. What are some of those investments?

Jim Umpleby:

Well, we invested heavily in our digital capabilities. We hired a new leader of our digital team that came from outside the industry, and he brought in a whole new leadership team and we built that up. We made those investments. There are other investments we've made as well, but to answer your question, what's given us increased confidence in our ability to meet that target is things like e-commerce. How we're increasing e-commerce and how much that is increasing, and the rate at which it's increasing, and that's allowed us to increase part sales, which is part of services.

Jim Umpleby:

We're pleased at the adoption of what we call CVAs, which are customer value agreements, which are more long-term agreements. Now 50% of everything we sell has a CVA attached to it, and that helps services as well. The way we've developed and we're starting to utilize AI to help our dealers and our customers be more successful. Preventing downtime, unplanned downtime, we have what's called prioritized service events, which is really based on AI, which gives our dealers a lead to contact a customer, to sell a product or service before it's required to be proactive. There's a whole variety of things that we're doing just based on the progress we're making in a variety of those elements gives us the increased confidence of our ability to make that services goal.

Chad Dillard:

Okay. Just wanted to spend some time on remanufacturing. And my question is just, why is it such a big growth opportunity and why does it not take away demand for new equipment?

Jim Umpleby:

Yeah, remanufacturing is very positive from a sustainability perspective because remanufacturing a part takes less power, less material, than a new part, but it also is at a lower cost point. And so, we've proven this, you know, for many, many years in our, in our gas turbine business, where we've remanufacture components for gas turbines, where it there's a great customer benefit to it, because again, it reduces it's a lower cost. So, it reduces their cost of ownership. It reduces our cost as well. So, it's a benefit for both of us. You know, I do believe that making our customers successful over the long term is the best thing for us. So again, we've demonstrated time and time again that by having remanufacture products, it is in that positive, both for our customers. And for us, we could say, well, we don't want to do it because we want to have just new parts again, remanufactured parts, make us more competitive. They make our customers more successful. So, it's a, it's a good thing for us increases our volume.

Chad Dillard:

Okay. Okay. So, I'm going to take one more question from online. So, what is the constraint to pursuing all the opportunities and service autonomous, et cetera, is the dealer network equipped to deliveries?

Jim Umpleby:

Yeah, so, so what are some of the constraints? Certainly, all of us are competing for digital talent and I think that's the case in every industry. So certainly, ensuring that we have enough digital talent certainly is something we're very focused on. I do believe our dealers are very well equipped. They're great partners with us and they work with us. And one of the things that we've started to do as part of this services journey is, you know, we have we've, we've identified a certain percentage of our dealers that represent a big part of the services opportunity. So, we've sat down with them. We've identified what the service opportunity is. We've identified what we both need to do, both the dealers and Caterpillar to achieve that that opportunity. And then we, that we, you know, we've a very rigorous governance process work to monitor how we're doing internally in terms of achieving our objectives to achieve that services goal and also what the dealers need to do and how they're doing as well.

Jim Umpleby:

So, we do believe that our dealers are equipped to capture this. The good news is that our economic incentives are very much aligned. Sometimes with manufacturers and distribution channels, the manufacturer wants to do something which may not be in the economic interest of their distribution chain. And that can cause problems. That is not the case here. Our economic interest are very well aligned. If we sell, we and our dealers sell more services, it's economically beneficial to them and it's economically beneficial to us. So, it really comes down to agreeing on the things that we need to do collectively to capture that opportunity. And we're certainly doing things like investing heavily. As I mentioned earlier in our digital capabilities, we're investing in AI, we're investing to connect assets 1.2 million connected assets, and we're asking our dealers to do certain things as well, but again, our economic interest are aligned. So, I do believe that that we'll make this happen.

Chad Dillard:

So just shifting over to construction, there's obviously a pretty significant infrastructure cycle that's, you know, starting to ramp up. And so, my question is, you know, what sort of productivity enhancing technology, you know, can, CAT offer that wasn't present in any prior infrastructure cycle? And are you starting to see like any, you know, real uptake or incremental adoption here?

Jim Umpleby:

So maybe to answer to the last part of your question first. So, you know, we are very pleased that the infrastructure bill passed, you know, our expectation is that will manifest itself into actual business for us probably late this year, more, more likely in 2023. And one of the things it does for our customers is if they know if a, if a construction customer is trying to make a decision as to whether or not they should buy a piece of equipment, do I make that capital investment now? If they're confident there's a pipeline of work behind it, they're much more likely to go ahead and make that capital investment and buy that piece of equipment because they know it'll be utilized for quite some time moving forward. To answer the first part of your question. We talked earlier about autonomy and the way that we're again, some and semi-autonomous equipment as well.

Jim Umpleby:

We're adopting technologies that kind of started in our mining space into construction as well. So, we believe that will help our customers. We talked about remote control line of sight. You know, an operator no longer for many of our machines doesn't need to be in the machine. They can do it remotely. They can do it from a location that may be line of sight. That's just safer or they can do it from a completely remote location where they're in a different place. And those technologies to answer your question, didn't exist 10 years ago. So that's a way that we're helping our customers be more efficient. And again, we believe that's something that gives us a competitive advantage as well. And we're committed to continue to invest in technology to keep that competitive edge.

Chad Dillard:

Okay. And sticking with infrastructure, what sort of opportunities do you see with the ability to automate road building?

Jim Umpleby:

Well, you know, I believe that there will be opportunities there. Again, we talked about autonomous and semi-autonomous. I suspect, you know, we've talked, we talked at a trade show a while back about an autonomous soil compactor. So, I think we will have that in the future. Again, we're working on a whole variety of things there, but you know, it's an exciting time for the industry it's changing pretty rapidly.

Chad Dillard:

And then what share of your revenues do subscriptions represent today and you know, where do you think that could go in the next, like, you know, five years, 10 years, and maybe you can lay out, like, what are some of the key drivers that will get you there?

Jim Umpleby:

Yeah. So, we don't break out publicly disclose subscription revenues. Again, it's all part of, you know, if we think about it, we put together a total package and what are we trying to accomplish? We're trying to always add value to our customers. We want our dealers to more success, be more successful and we want to profitably grow Caterpillar. So, when we develop our offerings, regardless of how those offerings are structured, we keep that in mind. And we don't, frankly, we don't disclose what those revenues are.

Chad Dillard:

Fair enough.

Jim Umpleby:

But we are just disclosing services once a year, as you know.

Chad Dillard:

So, as we enter the energy transition, you know, like what gaps do you think could be filled through through M&A?

Jim Umpleby:

You know, we continually charge our leaders to look at M& A as opportunities to help us in a whole variety of ways. We talked about the Weir acquisition that we made, this VM acquisition we made when oil went negative, that was a good time to make that acquisition. And that acquisition brought us certain technologies like an electric driven pump. And it did some other things that we didn't have. We bought CarbonPoint technology, which is CO2 sequestration and capture. We bought a company called Marble Robot, which helps us advance autonomy and construction equipment. So, we're, we've made a number of acquisitions like that that brought us technology to help us move more quickly along both the autonomy journey, the sustainability journey and the services journey. And I suspect we'll continue to make those kinds of acquisitions. I'm often asked. I was asked this morning in one of the breakouts. Okay. What about large acquisitions?

Jim Umpleby:

We have a very strong balance sheet, and we have that capability to make large acquisitions. We're not out elephant hunting. I'm not saying we won't do it, but again, that's not our primary focus. Our primary focus is on acquisitions that help us advance the three areas. I mentioned services, sustainability, technology as well.

Chad Dillard:

Okay. Maybe on the flip side, divestitures, can you talk about, you know, how your strategy, how your approach has changed, and you know, is there anything that, you know, we should be thinking about in the near-term horizon?

Jim Umpleby:

So, one of the things we did when we introduced our, our operating and execution model, our O&E model a few years ago is we got much more granular understanding by product, by application where we're creating shareholder value and where we're not. And as often, you know, Caterpillar was often the case, I think with many large manufacturing companies, we had a division let's say that had a dozen products and that division was acceptably profitable. We tended not to get involved in the details and to leave them alone and allowed them to invest to keep going. But then when we really, you know, got into the granular detail, we often understood that let's say six or seven of those products were creating shareholder value and five were not and hadn't been for a long time. And the ones that were creating value were more than offsetting the ones that weren't.

Jim Umpleby:

So now we look by product, by application, and have gotten very granular and understanding where we're creating shareholder value and where we're not, and those areas that aren't providing an acceptable return on the capital that they've invested. We've challenged the leaders to improve the profitability of those businesses. And in many cases, that's occurred, to answer your question and there's certain select cases. We've made a decision either based on market dynamics that, you know, what, if we look at the competitors in this space, no one does very well. Or in like one case, I can think of our competitive position with such that we decided, you know, what, we are better off investing our resources, our capital, our expense, and our management time in areas that represent a better opportunity for future profitable growth. So, we have made some investments, we got other specialty forestry products.

Jim Umpleby:

We made some investments in mining of some of the pieces that came with the Bucyrus acquisition more recently, we've, we've announced that we will only stay in the service and parts end of our big MAK engines that are built in Germany and we'll get out of the OE. So, we continue to look at our portfolio. And again, I suspect surgically will make changes over time. Don't anticipate anything major there, but we'll continue to do that. So that is all part of what we do. And it really comes down to, again, investing our resources in those areas that represent the best opportunity and future profitable growth. And that's why we're driving services. That's why we're driving sustainability and our measure for profitable growth internally is what we call OPACC, which is operating profit after capital charge.

Jim Umpleby:

So, we charge our, our, our groups, a capital charge, and then we expect them to produce a positive return after that capital charge. And what we drive is absolute OPACC dollar growth, again, operating profit after capital charge. And we believe that absolute OPAC dollar growth aligns well with TSR over time. So that is, that is our goal. So, as we think about always the tradeoff between margin percent and growth again, is we grow that absolute OPACC, those absolute OPAC dollars. We believe that's very positive for our investors.

Chad Dillard:

Okay. One more question for you online. To what extent do you hedge metals prices?

Jim Umpleby:

We do a certain amount of that. We do a certain amount of hedging and steel and other things. Again, you know, those only last for a certain period of time, and we're not immune from some of the changes that have happened. And what we have said though publicly this year is that we do expect price to more than offset manufacturing cost, you know, labor and material cost increases. So, we've said that for the total company for the year.

Chad Dillard:

Okay. And so, I guess in our, in our last 30 seconds, what's the 30-second elevator pitch for why to buy CAT today?

Jim Umpleby:

Well, again, I mean, you stop and think about our credibility. We've met our margin targets each year for the last five years. In the last three years, despite COVID, we've, we've produced $14 billion of ME&T

free cash flow. A lot of people wouldn't have thought possible. So, as you know, as investors look increasingly to companies that return capital to shareholders through dividends or share purchases where dividend aristocrat we've returned over the last three years, a 101% of our ME&T free cash flow to shareholders, we've, we've done what we said we're going to do. And we believe our total addressable market is increasing. So, we're very excited about the future. And I, in my 42 years of the company, I've never been more excited about our future as I am right now.

Chad Dillard:

I think that's a good place to stop.

Jim Umpleby:

All right, Chad, thanks your time. Appreciate everyone. Thank you.