



Orion Engineered Carbons Investor Day  
June 8, 2022

Wendy Wilson:

Hello, everybody. Thank you so much for coming. We really appreciate you all taking the effort to come to our first ever investor day. It's been a lot of work and we hope you get a lot of insight into the company and our growth plans for the future. My name is Wendy Wilson. I've probably seen you on a lot of Zoom calls over the last couple years, so it's nice to meet everybody in person. This is our famous slide. You've all seen it. We'll go right past it.

Wendy Wilson:

This is our agenda for the day, but a couple of housekeeping issues, or not issues, I'd to point out is for our Q and A session today, we're not going to be using a microphone and taking questions from the floor. You all have a QR code on your tables and for the people virtually attending today, there is a tab where you can ask questions. So you can start asking your questions now. You can ask them as they pop into your head during the presentations. And that way we can get more questions in and addressed after our presentation is completed. So please feel free, and so we'll try to get through all of them by the end of the day today.

Wendy Wilson:

Our speakers are all here. They will introduce themselves, Corning will introduce them as well. I just wanted to mention that we have another person from our management team who's here today, Bob Hrivnak, our chief accounting officer. I think some of you, if you've been on our earnings calls, have interacted with him, but I just wanted to say that he's here again today. With that, I would like to turn over the presentation to Corning Painter who is ready to go and locked up in his hotel room.

Corning Painter:

Thank you, Wendy, and welcome everyone to our investor day. It's a pleasure to be with you virtually. For those of you who are in the NYSE and those who are attending today, I personally was hoping not to be a virtual attendant, but yesterday morning I have the dreaded positive COVID test. But such as life and things move on, so let's go ahead and get started. We are really glad that you are with us today, and we are eager to share with you some of our excitement for the company.

Corning Painter:

I'm going to start out by just providing some background for people who are new to the Orion story. On this slide, you can see we are the number one global player in the specialty market, and we are the

number three global player in the rubber carbon black market, and at the bottom of that page, you can see we have a number of plants and labs spread out around the world, quite a distributed company for a firm our size. And the key point here is that we are where we need to be to serve our customers. Now, despite that geographic distribution, we are a very focused company. Next slide, please.

Corning Painter:

On the left hand side of this slide, you could see that specialty applications, they take 7% of the carbon black market. That's all they're worth. But for us, it's 27% of our volume goes into specialty applications. We are nearly four X overweighted into specialty and that specialty generates over 50% of our EBITDA. And to have such a strong position in specialty, we have certain anchors and of course, most important are our people, our knowhow, the relationships with customers, but also important is our production assets. Slide, please.

Corning Painter:

At the top of the next slide, you're going to see the furnace reactor. So that's the workhorse of the modern carbon black industry. That's what most of the carbon black in this world is made with that technology, and we use it a lot ourselves. But we also have those four other production methods. And if you look at them, it's a very different kit, they have different raw materials, sometimes very different raw materials, and critically, you end up making different products, different structures. Everything we do, it's carbon, but the differentiation is in the shapes and the distribution of the shapes and the sizes, the morphology of these materials. And that makes a huge difference in how they're going to perform in the customer application, in the customer formulation. And Dave Deters is going to give you a very vivid example of this in just a few minutes.

Corning Painter:

And in addition to those four other production technologies, we also have the ability to modify the surface chemistry of our material with the further enhance its performance in the customer formulation. Because in the specialty material space, you want to have just the right performance in their end market, in their chemistry themselves. So to give you a sense of how differentiated, how uncommon this production capability is, if you look at just the areas on this slide shaded in that gray area, for this year we expect to earn over \$80 million of EBITDA from that with over 40% margins, even at today's energy prices. So this is a very unique, a very special, like a hidden gem within the portfolio of Orion.

Corning Painter:

Okay, we've talked a lot about some numbers and some equipment at this point, but the most important thing is our people. So let's go to the next slide, please. I'm very pleased to be joined today by, in addition to Wendy and Bob, but also Dave Deters, who leads our innovation team, Sandra Niewiem, who leads our global specialty business and the AMEA organization, Pedro Riveros, who leads our global rubber business and the Americas organization, and Jeff Glajch, our chief financial officer.

Corning Painter:

Next slide, one more general comment. And that is if you're new to Orion, you're unfamiliar with carbon blacks, let me just say, they're everywhere. They're ubiquitous. Almost any manmade material that's black in color has got carbon black in it. And it is so widely used because you could not just provide color

to a material, you could strengthen a material, you can control electrical or optical properties. You can give a product or an ink, a certain sort of prestige feel to the look and feel of

Corning Painter:

It's a versatile material. And as I said, by controlling those structures, we can customize it to work well in a specific formulation. So let's go a little deeper. Next slide, please. Our business, is just so well positioned, we are set up to really benefit from some mega trends that are out there, and these are mega trends you see, you hear about every day, you can't open up Bloomberg or WSJ or wherever you get your news. You're going to hear about, especially the first two, electrification and sustainability. I mean, it's just undeniably two big themes of the modern era, but what you might not be as familiar with is how well positioned we are to take advantage of these two mega trends. So electrification, I mean, obviously it means EVs versus internal combustion cars, but also energy storage. Let's think about intermittent, renewable energy and the combination of those two drive a huge need to massively upgrade the electrical grid in North America, in Europe and really all around the world.

Corning Painter:

So what does this mean to us? It means a huge increase in the demand for conductive additives. And in addition to that enhanced tire-ware for people who are using EVs, if we go down one, just a sustainability, another thing we all know, that's a theme out there today. And one aspect of sustainability is electrification. And, that drives everything I just talked about. But one thing you might not think as much about is the circular economy under sustainability and specifically tire recycling. But if you worked in the tire industry, you would, and you can look up any of the tire companies. You can look up their joint statements about ESG priorities, creating a circular economy where old tires are recycled and used for new raw materials. That is a big theme for this industry. So what's the result for us on the right hand side, again, productive additive demands and strong interest in tire derived carbon blacks.

Corning Painter:

And on the bottom of the page, when we talk about growing consumer demand and I don't just mean post COVID 19, but if we think about even running up to that, like a growing middle class around the world, and as consumers have more discretionary income, some of their priorities go to let's say, ethical or sustainable shopping and sort of aspirational purchases. And I think the combination of those two is partially responsible for the success of EVs in Asia and in Europe, and in general, a sense of consumers trading up. And so products like ours that can convey a sense of prestige to an end customer product or the packaging or the coding associated with it. That's a real driver for us as well. Okay. So you guys, by and large, everybody, who's watching this, you are a professional investor.

Corning Painter:

You go to many of these sessions, and I know they can all kind of blend together after a certain period of time. So I want to give you a chance to visualize our business in a different way, with a real focus on specialty materials. Everybody wants to be in specialty materials and people like the margins, the sense of a moat, a competitive moat between you and your competition, the sense of a really sticky product customers don't want to change. Next slide, please. When people talk about it's almost like they're talking about some sort of a beautiful beach, right? And everybody wants to be on this beach. Let's think of this beach is specialty materials. And everybody wants to own a part of that beach. They want to be on it, whether you're the manufacturer or the investor. But what I would say to you is, if you want to be on the specialty beach, you need to care about the sand. Slide, please. The sand in the sense that each

of these grains of sands, these little things, they're like little individual specific end markets. When you're in specialty materials, you need to have the best performing material in the customer chemistry, in the customer formulation. That's what they're really looking for in the specialty space. And so, for example, we support coatings. So if you're interested in coatings, you have to think though, do you mean architectural, by the way, by that do you mean professional? Do you mean do it yourself? Something you get in a big box store. Do you mean Marine, protective? Do you mean automotive? If you did mean automotive for coatings? Well, there's the undercoat? There's tinting.

Corning Painter:

There's the top coat. There's solvent based chemistries. There's water based chemistries. There's the paint that's going to be applied at the OEM versus the paint that's going to be applied at a refinish shop. And the formulations around all of those different things, is going to be different. And you need to have the best material for each one. You need to care about each and every one of them. So that's a lot of work, but of course there's some rewards. One reward is well with so many small little individual micro markets. If the economy's weak in one area, it's often strengthening in another. And so there's a certain stability in the business. But another thing that comes with a lot of hard work, next slide to, is that you're able to create something like competitive moat. So sticking with our little visuals here. Stop thinking about a moat.

Corning Painter:

Let's think about a sea wall. That we're able to claim a part of that beach. Because if you have some unique capabilities, some sticky products, some deep customer relationships, and that gives you an element of a sea wall. And if you think back a few slides where I showed you those different production techniques, that are not widespread on this planet. Their uniqueness, that's part of our sea wall. That's how we are able to carve out some space and with our new investment around Acetylene conductive materials. That's also going to build up its own sea wall around that market location. Now there's a limit of course, to this analogy, because not every market's the same size and some markets are bigger than a grain of sand. So there's rocks, there's stones. But going with that, I mean, there's a new, huge application.

Corning Painter:

I mean, it's not a new application. There's been conductivity before, but the market demand for is just dramatically different. It's a whole new opportunity has emerged. Slide please. So you can think of on this slide is a representation of just like, wow, it's a significant market opportunity out there for conductivity. And sometimes when I talk to investors, they talk about it as though it's a monolithic opportunity and they're kind of like, well, do you think that's going to be carbon nanotubes specifically? They're thinking of lithium ion batteries. Do you think that's going to be carbon nanotubes or more of a three dimensional carbon, conductive carbon particle, like what we make? And what I would say is if you look at the same rock, but from a different angle. Slide, please. You could see it's really two opportunities.

Corning Painter:

And really now zooming in on lithium ion batteries. In those electrodes, which is where this material is used. There is both carbon nano tubes and three dimensional carbon particles. There's trade offs between them and Dave and Sandra talk about that. But the trade offs are such that the optimal solution is using both. And just about every lithium ion battery manufacturer does use them both. And I

believe you can add in silica, you can go solid state, whatever. You're still going to need conductive additives for those electrodes. And you're still going to want a mix of these two materials. And we'll show you more about that in a moment. Okay. We're going to leave the beach analogy for a moment. Next slide. And we're going to talk about sustainability. I think we went ahead two slides. Just back one please. Okay. So for sustainability, this is the slide you're going to see several times today and there's three themes to our sustainability platform.

Corning Painter:

Number one, enabling carbon. So this is where our carbon black improves the sustainability performance of our customers material. Number two, recycled carbons. So think about that circular economy, end of life tires, that sort of thing. And then finally renewable carbons. So think about the natural CO2 cycle. And if we can extract some CO2 from that cycle from a biological feed stock, in other words, that's what we're talking about here. Now I want to be really, really clear. We are not pursuing these out of a sense of defensiveness. We make an essential product. We are a good steward for that product. We co generate a lot of electricity. We provide district heating and so forth. Our raw material is an industrial byproduct. It is super carbon rich. And if we don't use it and when we use it, we are extracting that carbon and capturing as much of it as we can into the solid form.

Corning Painter:

If we're not doing that, it's going to go to a boiler. It's going to be burned. It's going to release a hell of a lot of CO2 and for steam and the CO2 footprint of an Esteem is going to be immense. So we're not doing this defensively. We are interested in these three options because our customers are. We see a business opportunity in this. And I would say, if you're an ESG investor and you're looking for an opportunity to both get a return on your investment and be part of something positive, then I would say, you should invest in a company like Orion that makes an essential material and is working towards a better future in this regard. Okay. So let's sum up what we've covered here. And it's just two main strategies that we're going to focus on today. Right? Very easy to understand what we're executing against for you as well as everybody in this company.

Corning Painter:

Number one, expanding our conductives business, right? And the material reality of that is the recent announcement about the newest Acetylene project here in the United States, in La Porte Texas. And number two is, lead in the sustainable transformation of the rubber business. And progress there, I think is going to be more stepwise, a percentage of recycled material, that kind of thing, not quite as dramatic. So now we'll go a little bit deeper on each one of those. First on the conductives. So if you look at the green power pile on, well that we've already talked about that. Some of the things that drive the market for us, and then we've talked about, Hey, look, there's two different ways you could approach this. In terms of carbon nano tubes or three dimensional. So let's, we've talked about that, let's focus on the right hand side.

Corning Painter:

And so why are we starting in the three dimensional KAPPA space? And the answer is, if you think about carbon nano tubes, I mean, it sounds really sexy. I mean, actually as a chemical engineer, I'd say it is really pretty cool stuff, right? And there are some technical barriers to making it, but the truth is there's a lot of people playing in that space and many of those players are in China. And you can just Google this for yourself. And if, instead, I think about where we are, we're making the really high end, very high

purity, a gaseous feed stock, very clean feed stock. If you think about what we're doing, there's technical barriers, for sure, to being able to do it. In addition to that there's supply chain barriers. It's not that easy to contract for a long term supply of high purity Acetylene like what we just did.

Corning Painter:

And so I believe that means this is going to be a more durable, more sustainable, highly differentiated market. I think, essentially the sea wall around this space is going to be really pretty, pretty fantastic. And that's why we're so interested. And it doesn't mean we'd never do anything in carbon nano tubes, doesn't mean we wouldn't collaborate with carbon nano manufacturers, but that's why we start here. Next slide. We talk about sustainability in tires. So look again, it's simple and it begins with the very top. OEMs want sustainable content. That's a fact, and the tire customers want a solution for end of life tires. Today end of life tires, they end up getting burned in cement kilns the tire manufacturers know that's not a good long term solution. It's not what they want in terms of the future of this.

Corning Painter:

They want a different answer. And so the solution is circular and renewable path forward. And there's got to be an element of circularity here to really address that issue around ELTs. That's why we're so focused on it. And what's it going to mean? Well, it's going to mean you'll see, we're able to make those products today. And it's just a matter of modifying our technology to enhance the efficiency, when we make these different materials. Next slide. So I've talked a lot about strategy and we're now just going to talk briefly about some of the operational things we're working on. We'll start out from a plant perspective. Next slide please. And on this one, you can just see a number of different themes that are available to us in terms of improving our current plant performance, all of which are going to make an improvement for us in terms of our financial performance as a company as well.

Corning Painter:

So no shortage of opportunity there. We go to the next slide. We come to pricing, which is just near and dear to my heart. And, it begins with knowing that you're entitled to a fair price for your product, which means getting a return on capital that you invest and providing training to our people and tools and analysis, price discovery, and so forth and aligning incentives away from volume, but to profitability, this sort of thing. And in addition to all of that, we are right now just in an incredible pricing environment. So North America has been brewing for a long time. There's been people on sourcing tire capacity here, but I don't think anybody's added a new reactor for the rubber carbon black. So in fact, actually at the end of this year, one factory's going to close. So this is going to get tighter. And we'll see over time, Monolith will come in with a new facility, but this is going to become tight.

Corning Painter:

And that makes the North American market, even with the Monolith, I think they're very tight and very attractive market for us. And then if we shift over to Europe, well, Europe used to more or less be a very tight in supply demand balance, including Russia as a supplier to Europe. But right now nobody's very comfortable with that Russian supply chain. And so I think that makes a highly favorable market, not just in terms of pricing, but let's say also in terms of overseas shipment and supply into the European market. So a super favorable situation there. So now if we think about sort of summing these up, let's go to our next slide. So a value creation mindset and a dedication to number one, thinking that what matters in this world is return on investment, not what kind of margin, not did we raise the price from last year, that kind of thing, are we getting a return on our investment? Our full investment? What you

have to invest to hit all the air rags and to keep the plant reliable for the long haul, that kind of investment.

Corning Painter:

And as we also can think about then how are we going to balance, is our cash flow improves, which we'll talk more about today between strategic investments and returning cash to our customers. And just give you a sense of that decision framework in action. We just made this significant investment or announcement of a new investment, a new plant in La Porte Texas, focused on Acetylene based KAPPA conductive materials. We have a high return project. We shared the financials on that in the past. We have very high confidence in this project. It's a duplicate of what we've upgraded our plant in France, too. It's the same supplier as we have in France. It's a great location for the chemical industry. And personally, I believe that the demand for this product is going to grow regardless of the economy. I mean, the economy can go into recession and the penetration of EVs versus internal combustion engines is still going to power forward.

Corning Painter:

So I think this is going to be a fantastic opportunity for us going forward. So what does this add up to? Next slide please. So if you look at last year, we are at 268 in terms of EBITDA, our midpoint of our current guidance is 325. So a pretty significant step up from there. So what can we do from here then in terms of our, let's say mid cycle adjusted EBITDA capacity. Next click, please. So first of all, we've got the KAPPA conductives, right? So basically that new plant plus get a bit more out of our current facility, that's worth about 50. Other capacity expansion and really what we just mean here is, that plant that we've been working on in China, a significant debottlenecking, which we've already talked about that is going to be on this year, a full year of [inaudible]. When we think about lapping it for the next year and then some small, but very important and attractive expansions in some of our most highly differentiated products.

Corning Painter:

And Sandra will talk more about that. Those aren't new projects, by the way, that's all pretty much underway right now. And then beyond that, we've got price and mix and think of that in specialty, mainly mix and in rubber, mainly price. And if you haven't already done the math, that gets us to 500 billion dollars, half a billion in terms of EBITDA capacity, that's a 17% CAGR for this company. And I just say this is like transformative for Orion, and it'd be good for any company, but for us, it's ultra transformative. Let's go to the next slide. So the sense of the growth threshold. The truth is we've crossed the threshold. You could see that in our EBITDA guidance, you can see it in our last quarter, we've talked about the mega trends that are helping to push us up these stairs.

Corning Painter:

We've talked about conductivity. There's great opportunity and we're on our way. We've secured the land. We've secured the supply. We're moving forward with an expansion to address that. We've talked about the pricing environment. You put these things together and it's a significant improvement for us. Orion does not lack for ideas or opportunities. Orion has lacked for cash, and this is going to change. Between the step up in EBITDA that I've outlined for you and the fact that the mandated EPA spending that, the light at the end of the tunnel, is approaching on that. You put those two things together and Jeff will walk you through this later. I mean, our cash flow situation is going to improve dramatically from here. So I think this is just an ultra exciting time to be part of this company.

Corning Painter:

And it's just very straightforward what we need to do. Nothing super magical in any of the slides that I've shared with you. It's just sort of nuts and bolts and a straightforward path for us. So, one thing that's important though, to making this all work out is having a good innovation platform so that we can remain close to our customers, that we've got the right applications' technology. That we're able to put up those sea walls in terms of getting difficult qualifications done, in terms of being able to make just the precise structures of the carbon that our customers want, or being able to use renewable sources. And so for that reason, I wanted Dave Deters to be our second speaker today. And with that, Dave, I'd like to invite you to come up to the stage. Thanks everyone.

Dave Deters:

Thank you, Corning. Good afternoon, everyone. My name is Dave Deters. I'm the Chief Technology Officer of Orion. I've been with the company seven years now. I'm located in Cologne, Germany. I have more than 25 years running global R&D organizations. I have specific expertise in coatings, specifically automotive OEM, refinish, industrial powder, Marine protective and decorative finishes. In addition to that, in my recent past, I've run a global business with profit and loss responsibility. Engineered carbons are more, much more than just making the color black. For example, they reinforce and they fortify rubber, and this allows you to have longevity. So your tire does not disintegrate in normal day to day activity. It also provides a strengthening agent for polymer applications and of course, rubber. It absorbs all UV light and visible light. And this is important for things such as your black clothing, where you prevent fading in direct sunlight or on an engineered plastic.

Dave Deters:

So the interior of your car, which prevents the embrittlement of that plastic. From a pigment perspective, we put functionality on the surface of the carbon black. And this is extremely important when you're working with cross-link systems, such as adhesives, coatings, printing inks, and of course, carbon black is conductive. It's conductive for batteries, it's also conductive for polymer applications. What we do at Orion is we tailor make, we design these engineered carbons to work specifically for the end use applications.

Dave Deters:

And we do this by a variety of different ways. We can control the particle size. We can control the structure. We can control the aggregate size distribution, for example, and all of these have a major influence on the end use application. I have a very simple experiment or demonstration to show you. And here I have two identical rubber balls. These rubber balls were made with the identical rubber compound. They were made with the identical formulation. They're made with the same weight percentage of carbon black, which is roughly 25% and the equivalent to a tire today. The only difference is the grade of the carbon black that's put into this rubber ball. And what you can see is, I drop these.

Dave Deters:

You'll see one, I'll do it on this side as well. One significantly has less bounce back than the other one. And, the reason that it has less bounce back is because it's absorbing all that energy. And I got a secret. This is intentional. We've done this intentionally primarily because that application is for a racing tire. And so when you have a racing tire, what you want is you want that tire to hug the road and you want it, as it heats up during normal driving, it heats up and by heating up, it provides the maximum dry grip adhesion, which is perfect for a racing application. Corning talked about our key production technologies



and the different capabilities that we have. And what I want to try to provide to you is reason why some of these special applications that are unique to Orion, what do they do differently and why do they allow us to broaden a product portfolio for the specialty market? So Gas Black, for example, with Gas Black, you can produce a very rich, very deep color black, and it also has special characteristics that make it applicable to the coatings and the printing inks world, for example.

Dave Deters:

Lamp Black is the oldest production process that we have. And here, if any of you have bought a new vehicle in the past couple of years, you'll notice there's a unique feature of that vehicle, whether it's a truck or a car, when you come to a traffic light, all of a sudden your engine quits. And then when you repress the accelerator, the engine starts back up and you go on your way. The purpose of this is to reduce the environmental emissions of your vehicle. So it's controlling CO2 emissions and in that vehicle is what they call a start stop battery. And so the start stop battery is actually predominantly using a Lamp Black 101 as its conductive additive, in that operation.

Dave Deters:

Thermo Black has natural gas as a feed stock. And what does that do? So natural gas provides a high quality zero defect material, which is actually quite applicable for window seals and door seals on automobiles. And Acetylene Gas is our latest addition to our production portfolio. Acetylene Gas, as Corning had alluded to, provides a number of advantages in terms of purity and other aspects. A current use of the Acetylene Black today is in the manufacturing of a tire. And what happens in a tire manufacturing plant is, they first inject a rubber compound into a mold, and then they take what they call a tire bladder. And it's like a balloon. And this balloon is filled with forced air and it pushes out the rubber compound into uniform distribution throughout that tire mold. And in the process of this, there's also, they inject steam and they bring the heat up of that mold to start the vulcanization process.

Dave Deters:

And this tire bladder has to both expand as well as contract in this process. So it has very high elastic characteristics, and it has very high resiliency to come back to its normal position. And this is a key characteristic of why Acetylene Black is a critical component of this operation. Expands, contracts, expands, contracts thousands of times before it has to be replaced. And so that's one key application today. What we're excited about as Orion is, Acetylene Black or our KAPPA conductives is a place where the lithium ion battery has a unique home for this point. And I'll explain that in more detail in a couple of minutes, another critical aspect of what we have, which makes Orion unique as well is we post treat carbon black. We can post treat any of our materials out of any production process and what are we trying to do?

Dave Deters:

We're trying to enhance performance. And what we basically do is we can preferentially surface treat the chemistry of a carbon black to make it much more applicable to that end use application. And so we have a couple of different oxidation agents and utilizing them, depending upon the end use application, we can preferentially treat and get different surface groups, which make these systems very, very compatible in different applications. An example of that is the automobile in the top left hand corner.

Dave Deters:

Here, the automotive OEM manufacturer's, they're looking for the deepest, the darkest, the richest, the blackest, the highest jet finish that you can make in the world. And that's still not good enough. What they also want is, they want, when you're looking at that finish in a glancing angle, that it has a bluish undertone. This combined portfolio of adjectives really creates a high elegance, something that is visually attractive, that consumers like, that the automotive manufacturers want. And by doing this, you're creating additional value for that product. And by creating that premium finish, if you will, we as Orion are able to sell that as a premium product with higher margins and higher price.

Dave Deters:

We have four innovation laboratories strategically positioned around the world, the largest one being in Germany, and the role of the German innovation group is to, this is where all the technology development occurs. So new technology, new products, new process development, all is housed within this main laboratory. And then after we have a product or a process, which is applicable for commercialization, we now send it out to all of our regional laboratories and their specific role is they customize this. They make this work in all the end use customers that are in that regional zone. All the customers have little bit differences in what their end use applications are, what their performance requirements are, and what their specifications are. So these group of people do that modification to make it applicable to the end marketplace.

Dave Deters:

In addition to that, we have really in all of our facilities, we have state-of-the-art equipment and it's not only state of the art. It's identical to what our customers use and how they evaluate these products in their laboratories. And so by having the same equipment, we have a very, very good and strong correlation factor to our results versus theirs. In addition, we normally just hire people who come from the industries, and so they bring another level of credibility to Orion. So now we can talk in an incredible fashion with integrity and the ability to correlate exactly with what the people are talking about in these specific end use market applications.

Dave Deters:

Whether it's coatings, whether it's a printing ink, whether it's an extruded polymer, whether it's tire testing, we have the capability and we have the equipment to do that. In Cologne, we have our largest innovation group and what you see depicted here in the two dark blue and the orange arrows are really our technical centers. We have the laboratory, which is in the light blue, but one thing that's also equally impressive here is in that green arrow, you're looking at the middle of a manufacturing site. And what we

Dave Deters:

... We have there is a pilot plant. And this pilot plant is used exclusively for our entire innovation process. In fact, we have a couple of different things within our innovation group. So in the middle we have what's called a mini plant. We commonly refer to this as a baby reactor. It's a very, very small scale furnace reactor, which is a starting point. Between the mini plant and the pilot plant, these are the heart and the soul of our innovation group, and every new product development or process development starts here. And after we get a product or a process through the mini plant, the baby reactor, then we then scale it up to the pilot plant. And because of our ability to scale up that easily, we can now produce a large enough quantity of material that we can send to customers, we can do our own internal testing for the end market applications, and there's enough material available. And now, because the pilot plant

is in the center of our manufacturing site, we can go right next door and produce this on a full industrial scale.

Dave Deters:

These two pieces of equipment, you'll hear from a testimonial in Pedro's presentation from our customer Michelin, they viewed our pilot plant and our mini plant as two key criteria for wanting to work with Orion on the Black Cycle project. You'll also hear from Sandra, who will talk about, we have a capacity constraint in gas black. And so we're de-bottlenecking and we're also expanding in this region very soon. And over the past six months we've used this gas black research plant extensively to make sure that our expansion, the material is identical, the quality's the same, and we can produce the exact same grades of carbon black coming off that gas black unit for the expansion.

Dave Deters:

So really our priorities today are, we have a large number of our resources focused on conductivity, a large number looking at sustainability or circularity, and then a further aspect is focused on operations excellence. And here the primary aspect is looking at, how do we improve yield? How do we improve capacity? How do we improve throughput through our traditional processes? And we'll talk about each one of those independently now. So when we talk about conductive carbons, we can utilize four different processing techniques to produce conductive grades. And I want to draw your attention to the middle pictorial, which is a microscopy photo of four different processes. They're all at the same resolution or magnification, if you will, 500 nanometers. And I think if you look at that picture on the right, you see something dramatically different than the three pictures to the left of it.

Dave Deters:

Here you're building an enormous structure from the settling gas black CAPA conductive product. And what's unique about that is, because you now have this high structure you now have a lot of space to conduct and transfer electrons across. And so this is a key component to lithium ion battery operation. If you look at what the ideal battery grade is, one, it has to be conductive. So now you have the ability to do that with a CAPA conductive material. In addition to that, you need low moisture pickup. And a settling based CAPA conductive material is actually hydrophobic. It doesn't absorb water at all. And this, from a safety perspective, a lithium battery is critically important. Because if you have too much moisture or water in your battery, you run the risk that you have a runaway chemical reaction, which leads to overheating of that battery.

Dave Deters:

The other key component is you need to have low metal content or low grit formation. And this is critical for lithium ion batteries for the longevity of the battery. If you have too high a metal content, you destroy the life of the lithium ion battery. And so by utilizing a settling gas as our feed stock, we have very pure, very low metal concentrations, typically below five parts per million. And the last component is the ability to disperse it. Because you have a whole bunch of materials that are coming together at the same time, and all these things have to intermix, they have to disperse together, and they have to form a homogeneous matrix. By doing that, the better that you can do that, the better the electrical conductivity and the better that battery works. So our CAPA conductive carbon based off of settling is a pure, good answer for the battery community. And that's why we're excited about it, but our customers are really excited about it. And that's why we're building another plant, is because we can't supply that volume today.

Dave Deters:

We also make conductive carbons for other reasons, such as polymer applications, high voltage wires. Even the application on the right, which is something that the majority of us do at least once a week as we fill our gas tank. In this instance there's a very special requirement for a conductive carbon. Between that filling point and your gas tank is a black rubber hose. And the conductive carbon that goes in that black rubber hose has one specific duty. It's to dissipate static electricity. And so every single one of us should be thankful every time we fill our tank and we dissipate that static electricity.

Dave Deters:

The other area that we're focused on in conductives is looking at the synergistic effect of carbon nanotubes with CAPA conductives. So I've already shown in my microscopy photo the large surface area and structure of the settling black. And what this does, it provides different contact points, as you can see in this pictorial. So you have the ability of carbon particles interacting with each other. And in addition to that, now if you add a carbon nanotube, now you have very different points. And with a carbon nanotube you can now even further extend this electrical transfer over a longer and longer range. And that's really, really important also for a lithium ion battery, because it allows you the ability, it provides the ability to discharge the energy in terms of electricity to your vehicle as you're driving it.

Dave Deters:

On the reverse side, as it's starting to recharge, because you have this long pathway of conductivity and electron transfer, the battery can recharge faster and faster. So the combination of the two, the discharge and the recharge, are important characteristics. And if you look at the bottom right hand chart you can see how the benefits of both a CAPA conductive and a carbon nanotube have. And with the ability now you have, you can maximize the performance and the cost by blending these two things together. And that's an exciting thing that we're working on and we're very aware.

Dave Deters:

Also, many of you I know here what other, you hear about the future of the electrochemistry that is going to silicone, is going to some other advanced material, is going to LFP, is going to a whole host of different things. Or even to a solid state battery ultimately. What we know is that under any one of those scenarios, you will still need a conductive carbon as part of that matrix. And so we feel very strongly and that's Corning's point around his earlier comments, which is, this is a key component for now and for the future.

Dave Deters:

On our sustainability front, we're really working in three different areas. If I can focus your attention first to the ELT, which is the end of life tire. From that end of life tire, that material is going into a tire pyrolysis process. And out of that is coming two work streams. The first one in the center in the light blue is a pyrolysis oil. This oil you are able to take and directly reconvert it back into an ASTM grade which meets the specifications of the tire industry. On the right hand side of that chart in the orange, out of the pyrolysis process you also get a rubber granulate, if you will. It's a combination of usually three different grades of carbon black that went into that tire, but it also comes also with a lot of other things. So it comes with potentially a high ash content. That ash content can be up to 20% to 25%. And this is a combination of silica and zinc oxide amongst other impurities.

Dave Deters:

And to be able to use that in a recycled form you have to clean those impurities, you have to remove them from that material. And by doing that, then you can take and you can reblend this recovered carbon black back into an ASTM tire grade in certain concentrations and still meet the performance requirements and the specifications for that grade. There are some limitations because you are mixing roughly three different carbon blacks together to form a single grade.

Dave Deters:

On the left hand side in the green, we're working with renewable carbon blacks. So renewable materials that are either based off of wood chips, they're based off plant based materials, so they can be either vegetable oils or vegetable oil byproducts or literally a plant oil. And we're converting these into renewable products as well. And Corning showed this slide as well. And so our innovation pillars are really looking at, how do we develop enabled carbons, recycled carbons, and renewable carbons all in the same sustainability front? And in our case words are just words. But here what we have done is we've put these into real live practice today. So putting CAPA conductives as enabling lithium ion battery technology. We have a huge group of people working on, how do we get new processing techniques to reduce the CO2 footprint and reduce the emissions?

Dave Deters:

We are very active with pyrolysis oils and recycled carbon black. And you can see there a number of grades that we've already produced in our plant, either in our pilot plant or in a manufacturing site. And these are now within tire and coatings customers today and they are evaluating this technology as we speak. In addition to that, we produced a number of materials based off of organic oils or byproduct vegetable oils. All of these products are available in tire, coatings, and printing inks. And again, these are all within our customer base. They're doing product approvals, technology approvals today. And the response that we get back so far is extremely positive. These materials are meeting the end use applications that they're designed for. And so we view ourselves as being the sustainability leader in the carbon black industry today because we're looking at, how do we reduce our fossil fuel consumption? How do we make additional products off of recycled materials or renewable materials?

Dave Deters:

And this then leads to the other really big initiative that we have, is because of this difference, this transformation difference, we are looking, how can we improve the yield? How can we improve the throughput to make more carbon black and the capacity of our existing asset bases? You as the investor community, you model the future financial performance of a company like Orion. You also look at, how do you predict the future earnings of this company? We within the R&D group of Orion, we also do modeling, but our modeling's a little bit different. We're modeling chemical reactions in a reactor. So we have modeled every single production line that we have globally in the world. And this is important for us, because we want to improve the process, improve the yield and the throughput and capacity of that unit.

Dave Deters:

And so through modeling, if we make some modifications to that reactor on a model, we can predict what's the yield performance of that. And for us, if you look at fossil fuels today, the price of oil is enormous. And so if we can get a 1% yield improvement out of the fossil fuels that we buy today, this is a significant bottom line competitive advantage for Orion. So we look to this as a way to enhance the value of our company. And we have a lot of people who are working in this area, but their specific role

of taking the renewables and even the circular carbon blacks, because the yields are less than what the fossil fuel counterparts are, we're looking at ways of, how do we build up that yield and that capability to get better utilization of them?

Dave Deters:

So in closing I'd like to say we really do have the broadest production capability of any carbon black supplier, which then creates the broadest product portfolio, which is especially attractive for the specialty market. We have a world scale innovation platform, and we also are working very diligently on the sustainability front to create an overall circular economy. And with that, I would like to say thank you very much for your attention. Out in the break room as we take our break, the rubber balls are out there. If you want to test them yourself or take them home, you're more than welcome. I'm also available for any questions that you might have as well. So thank you very much.

Speaker 2:

Thanks so much, Dave. And for those of you who are virtual, we have a 10-minute countdown clock. So please come back, and we will resume our presentations with Sandra, Pedro, and Jeff.

Speaker 3:

Did you ever notice I've been ashamed all my life? I've been playing games. We can try to hide it, it's all the same. I've been losing one day at a time. Bleeding, I'm bleeding, [inaudible]. Oh, I, I can't stand myself. [inaudible] in this [inaudible]. I can live or I can die. I can leave if I just hide. You believe and you lie. In my heart, in this [inaudible]. I can leave or I can lie. I can leave if I just hide. You believe and you lie. And you lie. And you lie.

Speaker 4:

[inaudible].

Speaker 5:

[inaudible].

Speaker 6:

[inaudible].

Sandra Niewiem:

I hope everyone got the chance to refresh himself or herself. My name is Sandra Niewiem, I'm the global head of Orion's specialty carbon black business and the EMEA region. I joined Orion in 2013, and during my time in Orion I've worked in various commercial leadership roles before I moved into my current position in 2019. And prior to working with Orion I was mainly in the process industries and industrial goods sector. My main objective today is to get you all a little more excited about our specialty business. And let's start with a short video, which illustrates really nicely from my point of view the specialty end markets applications.

Sandra Niewiem:

Yeah, I think this little clip illustrates so nicely that our specialty carbon blacks are really part of our everyday life. Probably all of us before even getting out of the house or out of the hotel this morning

have touched a dozen of different objects which contained hopefully our specialty carbon black. So what's Orion's role in that industry? Corning already outlined we are the leading global producer of specialty carbon black. We are holding a 25% share in the market, and in addition to the volume share we believe our value share is even higher than that. We sell across the world regions, and about 85% of our volume goes into non-automotive end markets such as the construction industries, the industrial goods sector, consumer goods, energy materials, and many other markets. We supply a diverse range of products to a diverse range of applications. We'll talk more about that going forward. And we have a significant growth outlook.

Sandra Niewiem:

So also bear with me a moment, I will talk more about this on the following slides. What's special about specialty? Number one, we serve multiple high value market segments where we compete by performance rather than by price. This is where we are really good at. We have a differentiated product portfolio, including conductive additives. And what we typically do, we take our portfolio and tailor it to our customer requirements, and this is how we win sustainable business relationships. We have a strong platform for growth. We have delivered a solid financial performance throughout the COVID-19 pandemic. And this year we target our highest gross profit margin and our highest EBITDA in the company history. Still some of you may say, "Well, there hasn't been so much growth in the past," and that's correct. We have had actually more demand than we could supply, or our capacities were so tied that we couldn't grow with our customers' demand.

Sandra Niewiem:

And we have addressed these growth barriers with our strategy and we have made a couple of announcements, and a couple of other initiatives are still in the pipeline. So I believe we are really on a verge of a new growth era. And this picture here right now with 146 to 162 million of EBITDA will become more something like 250 or even 275 million EBITDA in a few years from now. I'll show you over the next pages how we will get there.

Sandra Niewiem:

Five strategic strengths, five strategic strengths. So let me just pick two or three. We have a clear strategic focus. We have a clear product market strategy, a clear capital allocation plan that support our strategy. So we are not going everywhere over the next couple of years. We will do a few things right. We use our global network of manufacturing facilities, but also sales and distribution offices, to stay close to our customers. We can meet virtually every customer in person. And we make active use of our innovation capabilities. As Dave has shown, we work with our innovation colleagues and use our assets and innovation labs in order to develop the next generation of products, because this is important to stay ahead of the curve in our industry. But let's listen what our customers think about Orion's strength. And we have prepared another video for you. My name is Sandra Niewiem and I'm the leader of the global specialty business at Orion. On behalf of the Orion specialty team worldwide, thank you for watching this video. I wanted to take the opportunity to introduce you to our specialty customers, who are in the center of all we are doing. Our customers value Orion's products for conductivity, protection, and colorization across a variety of applications, such as EV batteries, coatings, things for packaging, power cables, engineered plastics, and synthetic fibers.

Speaker 7:

[Japanese].

Tim Knavish:

We are a very global company selling in over 100 countries and producing in 70 countries. So your global manufacturing footprint is critical to us.

Lucrece Foufopoulos:

Orion is for us a leading producer of specialty carbon black, and considering Borealis's strong position in the energy sector in particular, specialty

Speaker 9:

... the carbon black is very, very critical.

Nonia Xu:

[foreign language].

Speaker 10:

Product range, breadth of products that cut across our business segments and your technical, and marketing, and commercial teams, understand our business, which is very helpful and support our needs.

Speaker 9:

We have a firm commitment to being at zero by 2050 with a couple of ambitious targets over the next few decades, so Orion can help get a hundred percent to green power by 2030.

Speaker 10:

In order for us to move the needle on our carbon footprint, we need you.

Sandra Niewiem:

Yeah. So a big thank you to our specialty customers who volunteered to participate in this video and share their perspective.

Sandra Niewiem:

Let's talk more about growth. And let's look first into the market opportunities, and second, how we will capture those opportunities and drive Orion growth?

Sandra Niewiem:

There are favorable mega trends outlined by Corning, sustainability, mobility, growing consumer demands. And I would just like to give a little more color, how this impacts our specialty markets, by sharing a few examples.

Sandra Niewiem:

So sustainability is closely connected to the electrification trend. Electrification means electric vehicle adoption and growth of batteries, and batteries require conductive additives.

Sandra Niewiem:



Growing consumer demand means everywhere where an economy grows, where a middle class is involving, or urbanization, or other trends occur, there's demand for consumer products.

Sandra Niewiem:

And not only consumer products, but also industrial products are required to produce those products. To resume the example of Corning, about aspirational purchases and prestigious packaging.

Sandra Niewiem:

If you deliver a product in a prestigious packaging to upgrade the value of your product, you cannot just use any printing ink.

Sandra Niewiem:

You need a special printing ink, which contains a specialty carbon black that has the right color. But beyond the color, also the purity. You touch the packaging, your kids may play with this, it may be in contact with food.

Sandra Niewiem:

So for this, you need the right technology partner like Orion. And this is just an example for how this trends trend impacts our demand.

Sandra Niewiem:

Mobility, another example. Mobility is not necessarily a new trend. But within mobility, there are some changes that lead to growth of certain segments, such as engineered plastics.

Sandra Niewiem:

This is in conjunction with a lightweight trend to save material, to replace heavier metal parts, often with reinforced plastic parts.

Sandra Niewiem:

Again, this is connected with sustainability, saving material, saving fuel. And for these engineered plastics, you need, again, certain specialty carbon blacks that we manufacture with a small reactor, with a special beading. And again, another nice example how this impacts our demand.

Sandra Niewiem:

So how much does the specialty market grow? According to market experts, around four to 5% per year, over the next five years.

Sandra Niewiem:

It depends a bit on the geographic segment or the industry, plus minus 2%. But there are also micro segments that grow much faster than the average growth rates.

Sandra Niewiem:

So overall, I think this is a very favorable market to be in. We don't have to compete on price or buy market share. We can grow with our customers if we do certain things right.

Sandra Niewiem:

Beyond this chart, there are certain segments which we target and that will deliver higher growth than the average market growth.

Sandra Niewiem:

So our ambitious is to grow in line with the market, but to grow our value above the general market growth. So what do we do?

Sandra Niewiem:

And these are the four elements of our growth plan. I would like you to memorize; conductivity, premium growth, targeted capacity expansion, and EBITDA growth.

Sandra Niewiem:

What does this mean for Orion? We leverage the sustainability trend and grow with our kappa conductive additive family.

Sandra Niewiem:

We use the existing products. We develop future generations of this product portfolio, and we will have plans with a very favorable environmental profile.

Sandra Niewiem:

Second, premium growth is about targeting specifically attractive market and capturing opportunities in this market, in coatings, in packaging, and other high end markets, and deliver our differentiated and tailor made growth portfolio.

Sandra Niewiem:

And third, to expand our capacity to debottleneck, where it is in support of our strategy, where there are good returns on capital.

Sandra Niewiem:

And all of this together drives EBITDA growth. In fact, before we even start an initiative, we always have a review and challenge ourself, "Is their sufficient EBITDA growth to support the initiative?"

Sandra Niewiem:

For each of these four elements of our strategy, I have now slide or two. And let's start with conductivity.

Sandra Niewiem:

There are different growth projections of lithium iron battery demand growth, depending on the market research, company, or market expert.

Sandra Niewiem:

Growth rates vary from 15 to maybe 30%, or even more, per year. That's exponential growth. And the good news is, these batteries require conductive additives.

Sandra Niewiem:

And we are one of the few players who can deliver high quality conductive additives beyond even our current capacity. So what do we do to capture this growth?

Sandra Niewiem:

We expand our capacity. We talked already about our latest announcement on the Houston, La Porte plant in Texas, which quadruples our acetylene based conductive capacity. So this is good for us. It prepares us for the future demand growth.

Sandra Niewiem:

Second, we leverage the EV mega trend and focus on batteries. But in addition, we also target other attractive market opportunities, such as wire and cable, high voltage cables that require high purity carbon black.

Sandra Niewiem:

In addition, we focus already on the next generation of capacity expansion and portfolio expansion, as this market is so dynamic, that we have to think ahead and plan accordingly.

Sandra Niewiem:

So in summary, how do we win? We market our kappa conductive portfolio, which consists of both acetylene as well as furnace based additives.

Sandra Niewiem:

This makes us unique. No other player in the industry has both. And we have customers who buy both additives for different product formulations.

Sandra Niewiem:

We expand our innovation capabilities. So we invest and strengthen our innovation labs, in terms of headcount, in terms of equipment.

Sandra Niewiem:

We have battery labs in China, as well as in Germany. We leveraged the strong underlying growth outlook of our customers.

Sandra Niewiem:

Nowadays, almost every day, if you go through the internet or read in the newspaper, there's a new giga-factory announced, with some joint venture, maybe of an automotive OEM with a battery producer.

Sandra Niewiem:

And we are in contact with all of the players, on discussing their growth plans. In fact, we have just signed a long term agreement with one of the leading players for acetylene based copper conductive.

Sandra Niewiem:

And finally, manufacturing facilities which we are going to expand or to build on a greenfield basis, they will come with a very favorable environmental profile, mainly in the area of emissions law, greenhouse gas emissions.

Sandra Niewiem:

But also circular water use, and overall step change in sustainability improvement, which is also very close to our sustainability pledge. So we talked now, a little bit about conductivity. Let's shift gears and talk about other premium opportunities in conjunction with capacity expansion.

Sandra Niewiem:

And here's an example, our gas black business, which is a very classical portfolio. It's almost a hundred years old.

Sandra Niewiem:

And our coatings and printing customer love this product line. It provides a very nice color. But more importantly, it is easy to disperse and it's almost universally in use. So you can use it in different formulations.

Sandra Niewiem:

The sad thing about this story, is, over the past couple of years, we have been too tight in our capacities to supply future growth of our customers.

Sandra Niewiem:

In fact, since I'm with Orion, I observed, most of the time that we allocated volumes to our customers. So that means if a customer had a demand of a certain product, we gave him only maybe 90% of that product or 85%, because we didn't have enough just from our assets.

Sandra Niewiem:

So we found now a good way to debottleneck our assets with very limited amount of capital, which will give us around 15 to 20% growth for this product line, and will deliver eight to 11, maybe 12 million EBITDA over the next couple of years per annum.

Sandra Niewiem:

So from my perspective, good example for a targeted growth initiative in the premium area, high end coatings, nice color, easy to disperse, in conjunction with a debottlenecking or capacity expansion.

Sandra Niewiem:

So how does this all come together in terms of financial performance? We will grow our EBITDA from today, around \$150 million to around 245 to 275 million, in a few years from now.

Sandra Niewiem:

And that's an additional a hundred to 125 million EBITDA, or a four year 15% Kagle. As you can see, the lion share of this growth will come from our kappa conductive capacity, other capacity expansion, largely in the premium area, the 80 million that Corning outlined in the beginning of his presentation. And the remainder will come from a price mix optimization. That's what I have prepared for today. Just

to conclude, specialty is truly special. It's exciting to be in the specialty industry. We talk about expansion, sustainability.

Sandra Niewiem:

We are the leading global producer supplying a diverse range of applications, including conductive additives, which is our future.

Sandra Niewiem:

And we have a significant growth opportunity ahead of us. So I thank you for your attention. I look forward to the Q and A session. But for now, I hand over to you, Pedro.

Pedro Riveros:

Thank you, Sandra. Good afternoon to everybody. My name is Pedro Riveros, I am the senior vice president for the rubber carbon black business here at Orion, as well as the general manager for the Americas.

Pedro Riveros:

I've been with Orion for three years. And prior to that, I've managed several different types of businesses, ranging from large industrial gas, onsite plants, to performance chemicals, to supply chain intensive businesses in North America, South America, as well as in Europe.

Pedro Riveros:

I firstly want to thank all of you for taking the time here to understand the rubber carbon black business. I know all of you are very busy.

Pedro Riveros:

So the first question is, what is rubber carbon black? And you've heard a bit about this already from Corning and Dave. But I wanted to give a short clip of the different uses of carbon black and rubber compounds. So as you can see and as you've heard also from Dave, carbon black and rubber has several different properties, or it can enhance several different properties.

Pedro Riveros:

The best example is the rubber balls that Dave showed. And to bring it closer to applications, if you look at a tire, and a tire is actually made of several different rubber compounds in a tire.

Pedro Riveros:

And each rubber compound serves a purpose, whether it's the carcass, whether it's the tread, whether it's a sub tread.

Pedro Riveros:

And each one of them uses a different type of carbon black. So in a single tire, you can find as much as four different types of carbon black inside of it, and each one with a specific function.

Pedro Riveros:

So what that really means is that rubber carbon black is an essential part of the rubber industry. And that word essential, can also be used to describe the rubber carbon black business for Orion.

Pedro Riveros:

It is a very strong cash generator, has a very strong growth outlook that I'm going to be showing. It has a global position, and it is in a very good position to thrive in a changing landscape, that I'm going to also share with you.

Pedro Riveros:

If you look at the numbers, per se, Corny showed our position. We're the third largest global producer, in a very good distribution in terms of geography.

Pedro Riveros:

And this global footprint, really allows us to have strong relationships with our global customers, a global tire customers, global mechanical rubber goods customers, across all the regions, as well as working with the local tire producers.

Pedro Riveros:

But I also want to draw the attention to the center pie chart. The center pie chart talks about where the carbon black goes to. And 60% of carbon black goes into replacement tires, whether for truck, whether for passenger cars or buses.

Pedro Riveros:

And what that means, it really is that it is a resilient demand. And through different recessions, we've seen that carbon black with replacement tires, their demand continues.

Pedro Riveros:

And even if we look at COVID, and all the time that we were stuck at home, your passenger car miles driven declined.

Pedro Riveros:

However, the demand for carbon black for truck tires, actually did not decline and started to increase. And that's the advent of e-commerce, the home deliveries.

Pedro Riveros:

So it really shows the resilience of the demand for rubber carbon black. If we look at the financials, and you look at 2022, we are very glad to be putting expectations of numbers that are going to exceed pre-COVID levels, 2019.

Pedro Riveros:

And part of that is due to the expanding margins that we are achieving. And I'm going to talk a bit more about it.

Pedro Riveros:

But clearly it's a first step in our growth projections over the next few years. So when we talk about growth, what are the drivers behind that growth?

Pedro Riveros:

I would put them in two main buckets. What we've seen in the rubber industry and in the rubber carbon black is the traditional drivers, miles driven, tire production, OEM production.

Pedro Riveros:

And those have historically driven demand and will continue to drive demand. But we're also seeing an increase in importance and in relevance on these emerging mega trends.

Pedro Riveros:

Whether it's making carbon black with sustainable feed stock, or whether it's the EV penetration; the growth of EV vehicles, and also tire design.

Pedro Riveros:

And each one of these carbon black can play a role and will play a role. Take an example of the EV vehicles. So tire design is evolving as a result of EVs.

Pedro Riveros:

They're heavier, their torque demand is much higher. So the whole performance characteristics are changing. If you look at mechanical rubber goods, sound insulation in the electric vehicles becomes a much more important matter.

Pedro Riveros:

And that's where carbon black can really differentiate in terms of the rubber goods that are used for sound insulation.

Pedro Riveros:

So if you translate that into numbers, in terms of growth projections, we're talking around four to 6% growth rate, in terms of carbon black, over the next few years, globally.

Pedro Riveros:

While a lot of the demand, a lot of the growth is going to come from Asia, I want to also point out the growth projections for Europe and for north America, which are in the four to six, three to 5% range.

Pedro Riveros:

And why is that very similar to the global numbers? That is a growing trend that has happened actually before COVID, and it's expected to accelerate post COVID, is insourcing.

Pedro Riveros:

So tire production, moving back to the large consuming markets, whether it's in North America, whether it's in Eastern Europe, we're seeing that with several companies announcing new production plants in these regions.

Pedro Riveros:

What happens with that and what's the main reason behind it, is obviously automation, and also just proximity to market, and minimizing supply chain risk. But the consequence of that is a growing significant supply and demand imbalance. So if we look to North America, to start with North America, and where we see the blue line is capacity, the green line is project demand and projected demand.

Pedro Riveros:

Right now, North America demand is outstripping supply, and is expected to continue to outstrip supply, as we are seeing production actually coming down next year, due to another producer shutting down an asset.

Pedro Riveros:

And even after a new plant comes in a few years ahead of us, even then, you still have a shortfall. And that's a pretty big deal, because carbon black for rubber is significant amount of volumes, significant amount of quantities.

Pedro Riveros:

These are shipped in rail cars. So the logistics to bring rubber carbon black into the U.S., is not that simple. It's possible, but it's not that simple.

Pedro Riveros:

If we move to Europe, and we look at the bottom chart, and we exclude Russian capacity, which has been pretty much capacities being supply in the European region.

Pedro Riveros:

That imbalance is even higher. It's in excess of 30%. So what that really says, and obviously Russian supply continues to flow, all-be-it, very intermittently, there is clearly, from our customers, a desire to ensure that they have a reliable source of supply.

Pedro Riveros:

And we are in a very good position, given our plant footprint, both in North America and in Europe. So if you add all those factors, what are the main priorities for the rubber carbon black business?

Pedro Riveros:

And there's four main priorities that we're focusing on. First one is optimizing our portfolio, and looking at the product mix, and purposely changing our product mix to maximize the return on our assets, and provide the products that our mechanical rubber goods customers and our tire customers are looking for.

Pedro Riveros:

Second point is operational excellence. And when I talk about operational excellence, it's about reliability, it's about improving efficiency, it's about improving our energy integration with our existing co-generation and our future co-generation plants that we're going to be building in over the next coming years.



Pedro Riveros:

Third, deliver a strategic pricing, and looking at pricing, and looking at the return on capital, given all the capital that we have deployed and will continue to deploy, whether it's in North America or in other regions.

Pedro Riveros:

And the last one is developing and deploying sustainable solutions. And I'm going to talk more specifically on this one, in a few minutes.

Pedro Riveros:

If I were to then look this by region, and break this down a bit more in by region, and what are our priorities?

Pedro Riveros:

And clearly in North America, pricing, to recover all the capital that we have spent and we're going to be spending still this year, is paramount.

Pedro Riveros:

And we see the market conditions really allowing us to achieve that return on capital. We're also going to continue to obviously drive efficiencies and looking at debottlenecking our existing plants, and looking at incremental expansions at those sites.

Pedro Riveros:

If you look at Europe, it really is addressing this supply demand imbalance brought by the very unfortunate, Russia, Ukraine situation.

Pedro Riveros:

This is looking at obviously the pricing, and seeing whether pricing is consistent with what the value that we are bringing to our customers, but also looking at long term strategic relationships.

Pedro Riveros:

And what I mean here is long-term agreements. We have achieved these long-term agreements in South Africa. And what I talk about long-term is five years plus.

Pedro Riveros:

And we are seeking to see where we can achieve that in the European region, given really the insecurity of supply. And clearly our customers are looking at mitigating that risk, in terms of supply. And we see that as an opportunity.

Pedro Riveros:

We also are looking at our plants in our capacity. And we went on stream with our new line in Ravenna, Italy. And I can say that, that line is fully loaded as of the beginning of operation.

Pedro Riveros:

And that really was part of our plan, was ready to address the growing rubber and specialty market. But obviously, the situation in Russia accelerated that.

Pedro Riveros:

And really that also brings to the point that, reliability of supply is very clear in our customer's minds. We are currently negotiating contracts for 2023, now in June.

Pedro Riveros:

And that is not something that we usually do. So clearly, this is in the minds of our customers. So we're going to continue to look at debottleneck projects, quick wins at our existing assets here in Europe.

Pedro Riveros:

But also looking at our global supply chain and looking at where we can leverage our global assets. Which really gets me to Asia, where we're very excited about bringing in a new plant in Huaibei, at the beginning of 2023.

Pedro Riveros:

Which really is built to address the growing rubber demand and growing sophistication of tire performance in China.

Pedro Riveros:

But also in a short term, is leveraging that new capacity to support the shortfall and the desire of our customers to get more carbon black, both in North America, as well as in Europe.

Pedro Riveros:

We have several lines in China and Korea, that we share with the specialty business, and we're going to continue to look at optimizing those lines on what's the best grades that we can make to our customers, and in turn, the best return on our assets?

Pedro Riveros:

So clearly a lot of exciting activities, and obviously, with a few nuances by region. If I move to the sustainability, and we start with the voice of the customer.

Pedro Riveros:

We are heavily engaged and we're hearing very loudly from our customers, the priority of making their raw materials fully sustainable.

Pedro Riveros:

And when they talk about sustainability, they're also talking about circularity. Several companies have made very public statements around achieving fully sustainable raw materials by 2050, or earlier. This is something that for carbon black, as Corning mentioned, is an incredible opportunity. Carbon black in a tire, normally represents between five to 8% of the total cost. But in terms of mass, it is between 20 and 25%.

Pedro Riveros:

So the opportunity to make a tire sustainable is very much hinged on carbon black. So we see this as a tremendous opportunity to really capitalize on it.

Pedro Riveros:

And how we're going about it, is, we're going at it as you've seen with Sandra, as you've seen with Dave, is focusing on these pillars on enabling carbons and making sure that we can develop carbon black that can make their product more sustainable, but looking at recycled carbons, looking at renewable carbons.

Pedro Riveros:

But it all starts by understanding what our customers need, what our customers need in terms of performance in the tire, performance in a mechanical, the rubber's good. What is the quality? What is the consistency? What's the reliability?

Pedro Riveros:

It all starts there. And then once we have that clearly understood, which we have in our technical expertise, whether it's on our innovation labs, or whether it's with our team out in the field.

Pedro Riveros:

With that, we then focus on, what are the different technical pathways? And Dave shared this slide as well. And what I want to emphasize here is, there is no single magic solution.

Pedro Riveros:

There are several pathways to get to a recycled carbon or to a renewable carbon. If you look at the orange circle, recover carbon black, it starts from ELT; it starts from end of life tires.

Pedro Riveros:

So clearly addressing circularity. But recovered carbon black, which has existed in the market for quite some time, has a lot of issues.

Pedro Riveros:

It has a lot of impurities. So the use of recovered carbon black right now is fairly limited. Our purpose and our mission is to, through R&D, find ways to remove that impurity, find ways to make the addressable market for that recovered carbon black, much larger than what it is today.

Pedro Riveros:

If we move to the center, the blue circle, that is again, starting from end of life tires, going through a pyrolysis process and taking the liquid; taking the oil out of that process and putting it back into our existing plants, our existing capacity, and putting that to make pure carbon black, multiple grades, different types of grades that can fully replace a standard grade that's being used today.

Pedro Riveros:

We have demonstrated that, we have already announced different types of carbon black that we have made through that process.

Pedro Riveros:

And then the third circle; the green circle, is taking different types of bio circular, plant based oils. And again, putting it in our furnace process, our existing plants; our existing furnace process across the globe, and making, again, different types of carbon black.

Pedro Riveros:

We did this first time, 10 years ago. Our specialty business developed a plant based oil carbon black. We've leveraged that know-how, that technology, and brought it into the rubber industry.

Pedro Riveros:

And now we have produced several different types of grades with several different types of feed stocks, whether it's plant based, whether it's waste oils.

Pedro Riveros:

So we have proven that we can make this. The technical challenge that we are working on is improving the efficiency of making that with these oils.

Pedro Riveros:

And in order to do this, it's leveraging several aspects. First of all, R&D capabilities that they've described.

Pedro Riveros:

But as also working in collaboration projects, and different types of projects with different companies around the globe.

Pedro Riveros:

And one example of this type of project is the BlackCycle project. Jean-Michel Douarre from Michelin, one of our key customers who leads this project, has kindly shared some words about this project, and he's really the best one to talk about this. So I'll start the video for him.

Jean-Michel Douarre:

For the BlackCycle project, Michelin wanted to have the best partners. For the carbon black part of the project,

Jean-Michel Douarre:

... project, we were looking for a big player in Europe of the carbon black business, willing to innovate on sustainable carbon black. However, innovating on sustainable carbon black is not enough because we know that the quality of the carbon black has a great impact on the tire performance. So, developing a new grade of carbon black requires a very high level of technical and scientific skills.

Jean-Michel Douarre:

Moreover, having an equipment to produce carbon black at different scales, the lab, the pilot, the plant is key to develop and to scale up a new grade of carbon black. Based on those criteria and based also on the experience of collaboration between Michelin and Orion, we thought that Orion a good match for

the project BlackCycle and so we chose them. What we can tell is that after 18 months of work in BlackCycle project, Orion proved us to be right, because they made the first sustainable carbon black from pyrolysis oil of end-of-life tires.

Jean-Michel Douarre:

And that's a great technical achievement. Of course, now the project is not over yet, but we do believe that Orion will go along with Michelin on the road of sustainable mobility.

Pedro Riveros:

Thank you, Jean-Michel. So why do we believe we're in the best position to capitalize on this? Start with our R&D platform. Orion, it has a very strong specialty carbon black business, and in order to thrive, you need to have constant innovation, and we're leveraging that innovation, that capability, that DNA and bringing it into the rubber business to overcome the technical challenges that we've just talked about. We understand the customer requirements, we understand what they need in terms of performance, in terms of quality. We can model, we can replicate what they need in our labs, and we have the range of scale from lab to pilot to industrial scale, which then really transforms this into us bringing forward a range, a portfolio of products and approaches to address this sustainable requirement. And we can move fast, and we can move with agility.

Pedro Riveros:

So when you put all this together, you put all these facts together and translate this into financials. Well, what does this mean? So in 2021, the rubber carbon black business achieved \$120 million of EBITDA. By 2025, we expect to have an earnings capacity that's double of that. We are right now in 2022 on a very good path to actually we're ahead of plan of achieving that. And this growth is going to come through the growth investments that we are doing in China.

Pedro Riveros:

The de-bottlenecking that we are doing across our plants, and just overall growth of where we can serve in the different parts of the world, as well as pricing. And clearly, we expect our pricing to continue to move forward given the supply/demand imbalances that I've talked about and the need for better return on our assets, given all the capital we've deployed.

Pedro Riveros:

So in conclusion, when we talk about the rubber carbon black business, this is an essential business. It's one that we have a global footprint, a leading global footprint. We are a very strong cash generator and we continue, and will use that cash to fund the growth that we aspire to. And we are very well-positioned to thrive in a changing landscape that we are seeing in the rubber industry.

Pedro Riveros:

So with that, I want to again thank you for your time, and I'm going to pass onto Jeff to give more specifics about our financials. Thank you.

Jeff:

Thank you, Pedro. My name is Jeff Glajch. I'm the Chief Financial Officer of Orion. I've been with Orion just a few months. I'm fortunate to follow [Corning], Dave, Sandra, and Pedro. My part of the story

actually is quite easy after you've listened to the building blocks that they have all laid out. A little bit about my background briefly, I've been in the manufacturing industry for about 30 plus years or so. In the chemical market, in the energy market, in the US defense market.

Jeff:

Most recently, I was a CFO of a small public company for the last 13 years or so, and I'm educated as a chemist and a chemical engineer. So this all makes perfect sense to me. It seems like a good fit. So Corning started out talking about our value creation mindset. And within that, we talk about how do we make sure that we're getting a return on our investments?

Jeff:

How do we make sure that we're growing the value of this company and that we're running it smart and investing well? How are we generating more profitability? We use profitability... EBITDA as our proxy for profitability. Importantly, we need to generate cash, and we will start as you'll see to generate a very significant amount of cash as we look forward. And finally using that cash, one of the ways we use that cash is to invest in growth.

Jeff:

We're clearly at an inflection point in this business. So when you talk about inflection point, a lot of times people talk about it as they're just getting to it. We're actually at that and have already started down that path. And I think you'll see that very, very clearly going forward. So let me give you a little bit of history, recent history around our profitability and some of our financial metrics, just to give you a little bit of grounding.

Jeff:

So if I start in the bottom left hand corner looking at adjusted EBITDA, Orion has historically been bracketed in the EBITDA range just under \$270 million prior to this year. I had a little dip in 2020 when everybody was locked up and couldn't go anywhere, but that 270 was a cap for us. Clearly in 2022, we're taking a huge step forward at \$325 million, which is the midpoint of our guidance, which is growth of 21% year-over-year. Second area I'll have you focus on is on the top right, the volume. You'll see the volume is relatively consistent, other than a little dip in 2020.

Jeff:

And we're basically tapped out of volume right now. Now we've got a couple of capacity expansions in works right now, specifically the Hubei facility in China. We'll have a little more volume from [Ravenna] since we didn't have a full year of it this year, as we get the full year impact of that.

Jeff:

And then of course, the [kappa] conductors facility in La Porte, Texas, when that comes on stream in 2024. But volume's not the big driver. It's everything else. Look at sales. Sales, big step up in sales in 2022, why? Oil prices. Oil prices have ramped up very dramatically. We've seen a very significant impact in revenue and you see an impact in EBITDA profitability.

Jeff:

Now, for those of you who spend a little bit of time in front of a Bloomberg terminal, one of the metrics that's out there is your EBITDA percentage, your EBITDA margin, your percentage margin. And you'll see that actually for us as oil price have gone up, that actually declines a little bit. Now, why does it decline? We get over-recovery on oil costs, but we don't get enough over-recovery on a percentage basis to fully keep us at that same EBITDA level. So don't focus as much on EBITDA percentage, focus more on absolute EBITDA and focus on our gross profit per ton. And you can see our gross profit per ton has really stepped up in from 2021 to 2022.

Jeff:

So let's talk about this transition, this inflection point. So in the past few years, we've been constrained by cash. We've been constrained by cash because we weren't generating as much and we have the huge needs for our EPA-mandated pollution control. That EPA work is nearly done. By the end of this fiscal year, by the end of this calendar year, we will have spent more than 90% of the \$300 million that we have to spend there. We've got about \$25 million in 2023, and then we're done.

Jeff:

Secondly, maintenance capital. We've got a lot of maintenance capital. Our maintenance capital in the past though has really been, we've got a problem, what's the lowest cost way to fix it? And we fix it. Well, that's okay, except it really doesn't provide that best long term cost of ownership. So, we've been refocusing there, and now looking at if we've got a maintenance issue, whether it's an immediate maintenance issue, whether it's a preventative maintenance issue, we make sure that we invest for the best long-term cost of ownership that might cost you a little bit more in the near term, but ultimately it's the right way for us to perform maintenance and to keep our plants running, to improve their reliability, and perhaps to get some productivity out of them.

Jeff:

So going forward again, this value creation mindset, getting a return on our investments. Corning talked about it a little bit. Pedro's talked about it a little bit. We put a lot of money in the ground for EPA. We need to get a return on that capital. And we are starting to see that return on that capital coming. Going forward, we're going to invest in growth. Now, we have a lot of cash flow coming.

Jeff:

That doesn't mean we're going to spend all our cash flow on growth. We're going to pick out those right growth projects. A perfect example is the kappa conductives project, which we're going to spend a little bit of money this year, spend a lot next year, spend a little bit more in 2024. Those are high-return projects that we want to be able to do, that we haven't been able to do in the past.

Jeff:

We've been limited by cash. Now, what is our capacity to actually execute on those projects? And then finally, strengthening our operating productivity. I talked a little bit about our mindset change on maintenance, but it's also looking at improvement projects. In our last investor call, Corning had a slide that showed \$20 million in capital this year which was going to generate about \$10 million of ongoing EBITDA. Think about that. \$20 million in capital, and you're getting a return... You're getting a payback in two years, and you've got many more years to generate a return on that.

Jeff:

Part of that's the concept of preventative maintenance. Part of that's the concept of improvements in our capital spending in our plants. You've seen this data before. I just want to talk through it again, because I think it's important. In Sandra and Pedro's presentations, if you look at the specialty business, our EBITDA last year was \$148 million. We're looking at some amount of growth in 2022, but then as we look forward, we've got the kappa conductives investment in La Porte that Sandra talked about, that was announced last month. Most of that \$50 million is going to come from that investment.

Jeff:

Secondly, we've got other capacity investments. Specifically, again, a full year of Ravenna, the Hubei facility is the gas black facility or the gas black production. So we've got significant capacity investments there and then finally price and mix. And the specialty side, it's more mix. Both Sandra and Dave talked about some of the product substitutions, product improvements that we have. We think that will give us some additional profitability and ultimately take this business to 245 to \$275 million of mid-cycle capacity.

Jeff:

Now what does mid-cycle capacity mean? It means in 2025, if we're in a mid-cycle, which we think there's a very good chance we'll be at, we have a capacity to get 245 to \$275 million of EBITDA from the specialty business. That number is essentially equivalent to what we got from the whole company in 2021. Now, let's look at the rubber business. And Pedro showed this earlier. We had \$120 million of profitability last year, of adjusted EBITDA.

Jeff:

We've got 35 to 45% growth this year alone, from how? We got it from pricing, because oil prices went up? Sure. But we've also got it from strategic pricing as well as some additional volume. But as we've seen the market get tight from a supply standpoint, we have an opportunity and quite frankly, a responsibility to our shareholders to raise prices and to drive the profitability of this business. The capacity expansions, the same ones, at least on the full year of Ravenna and Hubei that will help the rubber business, and then finally price and mix.

Jeff:

And in that regard for the rubber business, it's much more priced than it is mix. Now, one thing you won't see on either of these charts is actually productivity. I talked about productivity a little. We're going to invest in maintenance. We're going to invest in improvements. We're going to invest in productivity. The reason we haven't put them here is we believe there is, as we're seeing today, some significant cost inflation occurring in our business that we believe that productivity will offset that cost inflation.

Jeff:

Now, if we get more productivity, great. That's upside, but we're trying to be a little bit conservative here. Again, you look at the rubber business and it's 230 to \$260 million of adjusted EBITDA, double where it was last year, equivalent to the whole company where it was last year. So we've got a nice pathway there and obviously, we've started out very well.

Jeff:



Let's combine these, and this is very similar, this is a slide that Corning showed earlier. Step up from 268 to our midpoint of our guidance is 21%. So on that 17% CAGR, we started ahead of the game. A lot of people show a chart like this, and they say 17% in the first year's at 12, and they're going to ramp it up. But we started at 21%. The kappa conductive capacity comes in place in 2024. How fast do we get that on stream? We'll see. If you look at what happened in Ravenna, it was pretty darn fast.

Jeff:

Perhaps this comes on also pretty darn fast. The other capacity expansions that are occurring over the next couple of years, most of which are already announced, so specifically Hubei and the full impact of Ravenna, and the gas black. That doesn't need additional capital that we haven't already announced.

Jeff:

So there's a pretty big step up. And then the price mix. So that \$500 million target, other than what's been announced to date, there's not a significant amount of capital to get to that \$500 million target. And that's important because as we talk in a couple of slides, we have additional capital that we might consider using for growth, that we want to consider using for growth. That will help us get well beyond that number, beyond that 2025 timeframe. Investing in growth, our mindset is very, very clear.

Jeff:

We are prioritizing our investments based on return. We want to get strong return projects, whether it's the Ravenna expansion, whether it's the Hubei project, whether it's the kappa investment, whether it's those operational investments that we get a quick return on, that's what's going to drive our investment thought process, is how do we get a financial return?

Jeff:

We deserve a financial return. Our shareholders deserve a financial return. We're clearly focused on the kappa conductive and other sustainable opportunities. Sandra talked about those. Dave talked about those. Pedro talked about those. Those are all areas that we want to focus and direct the company going forward. And then finally, and this is really important, to strengthen our project management capabilities. As we look forward and we look at these investments, we need to make sure that we're executing well on projects.

Jeff:

We've supplemented our current team with a few individuals to help strengthen those project management capabilities, and I think those are fantastic additions and will help us execute on this plan going forward. Now I've been talking about EBITDA and I've danced around cashflow. Let's talk some numbers on cash flow, because this is critical. I've got a slide here that talks about mid-cycle discretionary free cash flow. Let me explain how I define discretionary free cash flow.

Jeff:

It's adjusted EBITDA minus maintenance capital and the maintenance capital is you'll see it on another slide, will be up a little higher because we're investing proactively. We're investing in preventative maintenance. Minus EPA capital, which we have \$25 million of going forward, which will all be next year, minus dividends, minus interest. And of course, minus taxes. So this is our after-tax discretionary cash flow. And if you look back the last few years, there hasn't been a lot of it.

Jeff:

Despite not having a lot of it, we've put some money in the ground from a growth perspective, particularly in 2021, 2022, and 2023, and to help grow the business. But let's look forward. In the next three years, we have seven to \$800 million of discretionary after-tax, and that's an important word, after-tax free cash flow.

Jeff:

Think about that, seven to \$800 million, and then you look at the market cap of the company and you go, "Wow, that's a really darn big number." And we want to use that seven, \$800 million, there's a piece of it, significant piece of it for growth. But then we also want to look at what are our other opportunities, whether it's returning to shareholders, whether it's additional growth or organic growth, whether it's inorganic growth, M&A opportunities.

Jeff:

We have flexibility going forward that we didn't have looking back. Now, let's talk about that seven to 800 million of what we're thinking about right now. Again, this is looking at capital spending, just capital spending. And if you looked at the previous three years and you look by color, you see a lot of blue on there. Well, what's the blue? The blue is maintenance and productivity. There's a good amount of maintenance and productivity in the last few years, we're going to have that going forward also.

Jeff:

We've got placeholders in there for about \$90 million a year of maintenance and productivity. But remember, my seven to 800 million had already taken that out. We have the EPA CapEx. Well, most of that has been spent today, a little bit more in 2023, but that was outside of the seven to 800 million. So what's the seven to 800 million going to be used for? Well, we've got about a little over 80 million of growth capital in 2023. Most of that is the kappa conductives facility. We've got some kappa conductors spending this year. We'll have some in 2024, but most of that 80 million is the kappa conductives facility. Look at 2024 and 2025.

Jeff:

We put in placeholders of a \$100 million per year. Again, there'll be a piece of 2024 that will be kappa conductives, but the rest of it right now is a placeholder with not necessarily hard defined project saying, "It's this or it's this." We're working on those. We'll identify the right projects. But let's take the sum of all those years.

Jeff:

You got \$280 million, a little under \$ 300 million of growth capital in those three years. That 300 million is a subset of that seven to 800 million that I talked about on the last slide, which means if we do spend that 300 million in growth capital, we still have four to \$500 million in the next three years to do something with. Again, there could be more growth opportunities, perhaps. Could be return to shareholders, perhaps. There could be other organic or inorganic opportunities.

Jeff:

So we'll have to decide over the next couple of years what the right capital allocation for this business is. But I think it's really important. We've got seven, 800 million of cash available. 300 of it roughly is

placemarked here. We've got four to 500 million of additional cash coming into this business over the next three years, a completely different story than what we've had in the past.

Jeff:

So again, the value creation mindset, how do we provide a stronger return for our shareholders with first off profitability, but ultimately, that generates and yields cash? We generate a lot of cash. We need to do good things with it. And finally, we will invest a portion of it in growth and we'll decide what our right capital allocation is going forward as we're moving through that time period. With that, I'm going to open the floor. I'm going to pass it back to Corning, who's going to open the floor for question and answers for all five of us, actually. Corning?

Corning Painter:

So when I started out, I said... Are we able to hear me?

Speaker 11:

Yes.

Corning Painter:

Okay, great. So when we started out, I said, "Look, we want to share some of our excitement." I hope we've done that. It's really hard to do it right when you're sitting here in a hotel room. But I mean, it is a super exciting time for this company. We are past the verge, we're on this ramp of just getting into a beneficial cycle where we generate free cash flow in a way that we haven't for years, and then we do productive things with it.

Corning Painter:

So I think it's just a super exciting time for us. And I'm glad you're all here with us today as investors to have a chance to be a part of that, and we'd really like to open up now and entertain your questions.

Wendy Wilson:

Sure, Corning. The first question is around kappa acetylene. Can you please discuss the capital kappa acetylene opportunity out five to 10 years? What is a range for CapEx and EBITDA?

Corning Painter:

Okay. Well, thank you for that. Sandra had one slide that bracketed where we saw it going from a KT perspective. But Sandra, could you expand on that?

Sandra Niewiem:

Yeah. So by the end of the decade, our capital opportunity just for lithium iron batteries is around 80 to \$100 million EBITDA. And that's just for batteries, I believe, in addition for other conductives, we talk about an additional 25 million. In terms of capital that would require additional capacity expansion, but it's I think too early to quantify that. Yeah.

Wendy Wilson:

Okay.

Corning Painter:

But if we wanted to just think ballpark, so we said about 40 to 45 million of EBITDA with our current investment of about 120. So I think that would give investors just a chance to ballpark what that might look like going forward.

Wendy Wilson:

How big-

Corning Painter:

What's our next question?

Wendy Wilson:

How big is your current acetylene kappa customer, and related to that, how much would a gigafactory consume?

Corning Painter:

Right. So let me take the first and then I'll hand off to Sandra. Our current customer wanted a larger quantity than we were prepared to contract. Our desire with our limited current capacity is to qualify as many customers as possible.

Corning Painter:

I think that's the right long-term solution for us in terms of loading a new plant. So I think we could have easily twice as large, maybe four times as large, but Sandra, maybe if you want to comment on what we think a gigafactory could be, which is a pretty unprecise term, I realize.

Sandra Niewiem:

Yeah. So I think a gigafactory could easily fill the plant that we have in place right now in France. And I mean, in terms of conductive additives, that would be around 3.5 KT capacity that we have in France. We have 12 KT of carbon black capacity in La Porte. So depending on the size, no, it could be then two to three gigafactories, but it's not a very precise figure obviously, yeah.

Wendy Wilson:

Okay. Do you plan to compliment your new kappa acetylene plant by pursuing any adjacencies, such as production of CNTs?

Corning Painter:

So maybe I'll just talk generally and then invite Sandra to speak further. So we're open. We see the huge opportunity that is conductivity. We are approached by many CNT players around different collaboration opportunities and other opportunities. And we see that as a viable option for us going forward. We wouldn't want to take that off the table. We also don't want to be super specific on exactly what we would do next in this space. Sandra?

Sandra Niewiem:

Yeah. I mean, we are as mentioned exploring opportunities for portfolio expansion. This includes [FERNS] based additives, acetylene additives, and we are open to explore also alternative technologies.

Wendy Wilson:

Okay. Moving to another subject. Can you update us on how you see the European situation evolving with respect to Western tire makers, and other carbon black consumers looking for alternatives to Russian carbon black? And under what circumstances might the Russian tonnage be subjected to sanctions as it seems that that has not happened?

Corning Painter:

Okay. So again, I'll say a few words and turn over to Pedro. I think one of the underlying questions out there is going to be is are we going to invest in Europe? And I want to answer this because I've had this same exact conversation with some of our big tire customers. And I would just remind our customer and our investors that we have supported that industry now. Because building a new plant is not going to solve the immediate issue.

Corning Painter:

We've supported them now by reprioritizing, how we've used the Ravenna facility, we've supported our current customers by making product available out of other geographic locations, and that supply chain is flowing as we speak. We've got this new plant coming up too, reactor lines in China, we're prepared to use that as support and in a practical sense, that's what can support these folks near term. In terms of new capacity for us, I think it's clear where our preference is. We just announced a big acetylene facility in the specialty space.

Corning Painter:

We value our customers. We had several customer testimonials as part of this. They're a super important stakeholder, but our investors are important stakeholders too. And we need a solution that makes sense for them. So in the immediate situation, we don't have plans to invest further in that. Pedro, why don't I let you expand on some of those other points?

Pedro Riveros:

Sure. So carbon black is obviously very consequential to the tire production and we can speculate on what will happen with carbon black coming from Russia, whether it's going to get banned or whether it's not. But I think what we're hearing from our customers is that they're looking for security of supply, and that's our focus, is being able to provide either from our existing plants or from our global supply chain a security that they can depend throughout the course of a year, throughout the course of several years, to be able to ensure that they can keep producing tires.

Pedro Riveros:

And that's really where our focus is. And it's very difficult to predict what exactly that outcome is. But we can hear from our customers that they clearly want to de-risk that supply chain.

Wendy Wilson:

Here's a specific question on a similar subject. How much does it cost to ship rubber black from Asia into Europe?

Corning Painter:

Well, that's an interesting question because what does it cost in the normal supply chain times, and what does it cost right now? Normally, you talk about, I don't know, a couple hundred dollars. Pedro, I think now you're talking quite a bit more than that. What would you say?

Pedro Riveros:

Yeah, a couple hundred dollars was the previous reference, but it's obviously higher today just given all the supply chain outside of Russia, just the whole shipping side. But we also have to understand that this is something that entails also a lot of handling, because you're bringing it in a certain type of package and then you've got to repackage it, put it in bulk.

Pedro Riveros:

So that's not a very simple supply chain. So if you look at capacity globally, China's where you would start, but then you have all these supply chain obstacles that need to be handled. And that's clearly something that our customers are weighing and balancing that out.

Wendy Wilson:

When or at what price do you think new industry rubber capacity might enter the market and impact your current pricing position?

Corning Painter:

Well, I think we have to be careful talking about what our competitors would do in terms of capacity. We really could speak for ourselves. What I guess we'd say is there has been a recent announcement of an expansion by one competitor, interestingly not in North America. And I personally don't think we're going to see expansion in North America anytime soon, in part because there's this overhang, the possibility of monolith and in part, just as evidence on the ground, we are seeing one facility close.

Corning Painter:

But the kind of volumes we're talking about are dwarfed by the magnitude of for example, in Europe, the Russian supply situation. So I wouldn't see that as really material in that. To be clear, as long as Russian material can flow, I also don't think we're going to achieve rents or exorbitant fees in Europe. This is going to have to be a fair price, but a price that does represent a return on capital. I don't know, Pedro, anything you'd like to build on that?

Pedro Riveros:

No, I mean, I think from our standpoint, where we see the quickest win and the best value return is really looking at our existing assets and looking at de-bottlenecking, and looking at different ways in how you can add capacity very quickly to the market, who is looking for an answer today. I think in terms of long term, Corning already answered North America. I think in Europe, I think it evolves around discussion with our customers and how are they prepared to entertain long-term agreements?

Pedro Riveros:

And I think if that is something that is becoming more and more possible, that can then start to enable discussions around longer term capacity. But I think right now, the focus a lot is on short term.

Wendy Wilson:

How much BlackCycle sustainable capacity can your asset base support today? And what kind of GP per ton can it command?

Corning Painter:

So a key thing about BlackCycle is that someone else is doing the pyrolysis process, and creating that oil. And then we're taking that, and I'd say that's really a key factor of just simply the availability of this material. Pedro, I know this is near and dear to your heart. Why don't you take it from there?

Pedro Riveros:

Sure. So, in terms of capacity, once the feed stock, the pyrolysis process starts to gain traction, as I mentioned, we're using our existing assets and really is looking at our tire customers, our mechanical rubber goods. And they're looking at this

Pedro Riveros:

Is to replace their existing demand for carbon black. So we are basically repurposing and looking at our existing assets to give that capacity. So, feedstock resolved, we have the technology and what we're focused on is improving the overall yield, the overall efficiency of that and henceforth the capacity.

Pedro Riveros:

In terms of GP per ton, today, as with any new technology, the cost of this is higher than what it is under normal Carbon Black but the pathway, the medium and long term roadmap is, we do see that getting to a cost position and a profitability position that's similar and better than what we have today.

Wendy Wilson:

When you speak about pricing driving rubber black profitability, and you separate the difference between pass through pricing of feedstock, and base pricing, and how that flows through into variable contribution margin per ton and GP per ton, is 2022 the peak in GP per ton?

Corning Painter:

So when we talk about pricing in these sessions, we mean pricing that we achieve. So we mean in the base price, not in effect of the pass through overall material costs. And Pedro, you can expand on this, but there's no way I see 2022 as a peak year in that regard.

Pedro Riveros:

Yes. So as Corning explained, our pricing in the rubber carbon black is simplistically consists of a base price, and then a pass through mechanism. So as oil goes up and down, your total price is going to fluctuate due to price of oil. But the base price, and when we talk about pricing, we're talking about continuing to moving that up, so from a base price perspective, and therefore our overall variable contribution, we expect that to continue to grow. Oil price can go up and down, and that can affect our overall variable margin. But fundamentally what we're seeing is a 2022 is not the peak.

Wendy Wilson:

There have been some recent media reports on a study about particulate pollution from tire wear. One conclusion was that there was a wide range of particulate pollution between the best and the worst. Is this something that you see tire manufacturers being focused on? And is that an opportunity for Orion?

Corning Painter:

Maybe just one build to the previous question. So, because we pass through raw materials, that goes to the point Jeff made, if you're looking at a Bloomberg terminal and you just look at the margin curve, right? Our profitability, it's effectively diluted by higher energy costs. Right? But don't confuse that with decreasing, let's say quality of the business. If you were going to look at it as profitability per ton, right? You'd see that we have grown that over this cycle, just a important point, and the standard screen isn't going to show that. Regarding tire wear particles, personally I would see it compared to silica as a minor opportunity for us. Pedro, maybe you want to expand on that?

Pedro Riveros:

Sure. So tire wear particles is a topic that has come up. I think there's still a lot of debate on exactly the extent of it, but what that plays, and Dave can obviously add further to this, is that if you have a tread that lasts longer and therefore emits less tire wear particles, that is something that is clear to lever and carbon black plays a role in extending the life of a tread. So the more carbon, the higher the grade or the quality of the carbon black, you can influence that. So if life of a tire becomes more critical because of tile wear particles, carbon black, and we are very well positioned to benefit from that. I don't know if Dave, anything you want add?

Dave Deters:

Just a little addition to that. So of course, I agree a hundred percent with what you said, Pedro. We can extend the lifetime, the wear performance of the tire. I think the primary particles that are being attributed to an issue today are the other components of the tire and all the, there's roughly a hundred different chemicals that go into the manufacturing of a tire. And it's some of those materials that are being targeted at least today as affecting aquatic life and things of that nature.

Wendy Wilson:

Changing the subject. We had another CAPA question come in. What's the timeline for the CAPA ramp up? And I think this is specifically for the new facility, looks like the bridge assumes it's fully ramped up by 2025. Is that correct?

Corning Painter:

Well, so that bridge is phrased as our mid cycle earnings capacity. And I want to be clear on that. That's an earnings capacity. What is our capability in 2025? We don't know. Is the world going to be a good economy, recession, whatever, but that's the earnings capacity we should have at that time. Sandra, why don't I let you speak to qualification periods?

Sandra Niewiem:

Yeah. So depending on the size of the battery, manufacturer approval times are between half a year to one and a half years. So based on our business plans, we project close to full utilization by 2027. However, as we already discussed, given the capacity shortage and given the earnings from other recent capacity expansion that may come earlier, no? Robin, as an example.



Corning Painter:

I used to work in the Silicon semiconductor supply chain and there too, right. Very long supply chain qualification periods. But when there's a shortage, you can get qualified very quickly and think about Revena, right? How quickly. That is the fastest loaded plan in my career. Granted not as strict or difficult a qualification is what we're talking about here, but we'll just have to see what the supply demand picture looks like then.

Wendy Wilson:

What options do you have if Russian energy hydrocarbons is completely cut off?

Corning Painter:

Well, so for us, we don't directly get any raw material from Russia. Within our supply chain, there may or may not be people who have something from, let's say the oil side, something that hasn't been banned. So I don't see that as a huge thing. If we just expand that, and then we talk about, well, what if natural gas gets cut off? And if that were cut off widely in Europe, I think you might see a really strong ban on all Russian exports. Right? I think things are getting very testy in that kind of a situation. In those scenarios, we've got the ability to change some of our actors from natural gas to firing oil, that kind of thing. That will become more important for us. And I think that we'll be in a very strong market position in terms of the need for carbon black in Europe, in that kind of a sort of far end scenario.

Wendy Wilson:

Does your announced CapEx investment support 500 million in EBITDA capacity? Or do you need to invest more into your asset base to achieve that?

Corning Painter:

The 500 earnings capability, 500 million earnings capability that we put out requires us to complete a settling based project to finish off some, let's say small de-bottlenecking, but very high return, very impactful projects in the specialty area, think about protected by that sea wall in that graphic I used that Sandra mentioned. But that's it. It's not anticipating really further investment beyond things that we've currently announced. In that timeframe, I would hope we continue to generate growth opportunities and that we might spend, and Jeff put in some placeholder numbers around what future capital could be. And those are only placeholders and not predictions on what our capital is going to be even for next year. But those would be really things above and beyond, and perhaps beyond 25 as well when they'd be available to us. I don't know. Jeff, you've been very quiet in the Q and A. Would you maybe like to expand something there?

Jeff:

Sure. Thanks, Corning. Yes. Corning said the CAPA facility is in 2022, 2023, and a piece in 2024. The rest of what's in 2024 and pretty much all of what's in 2025, none of that is needed to generate that 500 million dollars of earnings capacity. That would generate earnings capacity beyond 2025.

Wendy Wilson:

On the bridge to 500 million EBITDA. What are the assumptions behind the price mix component? How much is rubber versus specialty?

Corning Painter:

So I think on the individual slides that we used for that was broken out. If you look at Sandra and Pedros. Jeff, you can, or anyone can jump in. I think that was roughly 35 and 15. Is that right, guys?

Jeff:

That's correct. It was 35 of rubber. Most of that being priced, and 15 of and specialty, most of that being mixed.

Wendy Wilson:

What is the oil price expectation underlying the 500 million?

Corning Painter:

So with that would say, we're at a mid cycle situation. So mid cycle, and it's not a precise number, but I put that more in, let's say the \$80 range. So when you think about the pricing and rubber, clearly the pricing opportunity is larger than 35 million, but I think you'd need to back off a little bit saying, well, okay, what if we're at a different oil price? Jeff or Pedro, anyone want to expand on that?

Jeff:

Sure. Yeah. In the mid cycle, I think we use an 80 to a hundred dollars range. If you want to midpoint it, it's probably around 90 or so. And if you think about what we're currently thinking for this year, we've used a hundred to 105. Obviously we're above that right now. So there would be a decline in oil price toward that mid cycle time period.

Wendy Wilson:

How much of the 400 to 500 million cash generated will be needed for working capital needs with oil at 120?

Corning Painter:

Jeff, why don't I let you take that one?

Jeff:

Sure, sure. No problem. We've actually, as we've looked at this, we've excluded working capital. There's not a significant of that four to \$500 million, not a significant amount that would be needed for working capital. But let's step back to the last answer, which was the oil price today and the oil price in our mid cycle. There's a reduction between today's price and that mid cycle price. If you go from the hundred, 105 down to 90, there's some working capital recovery. Perhaps we need a little bit of working capital to get to that 500 million. It pretty well balances out.

Wendy Wilson:

Can you discuss how your business outlook would be impacted if oil and natural gas were to keep increasing? And how would your business outlook be impacted if both were to decline?

Corning Painter:

So, I think one of the biggest impacts here is just going to be the general economy, right? We gain a little bit with higher energy prices, but personally, I'd be totally okay if energy prices would just come down a bit. I think for the global economy and we're not immune from the global economy, that would be a positive for us in that thing. We strive in our agreements with our customers to say, hey, look, we are passing this through. Right? Our job is an oil arbitrage or energy trading. We're looking really just to pass this through and have a minimal impact on it. I don't know. Anyone else want to add some comments there?

Wendy Wilson:

Nope.

Corning Painter:

No. Okay.

Wendy Wilson:

One question back to rubber. How much, or are your contract terms lengthening in this current negotiation cycle?

Pedro Riveros:

So, as I mentioned, we have achieved long term contracts. And when I say long term, it's five plus years in certain geographies, such as South Africa. And in these negotiations, I think that the, especially in Europe, the Russian situation really has brought in the forefront the discussion that we've been talking about. I would not be surprised if we do signed other long term agreements, but those obviously need, are not simple and need to be well structured so that it's properly balanced between the two parties. I think right now, our customers are, their main priority is security of supply. And if that can be achieved to a long term agreement, then we would certainly would be glad to do that.

Wendy Wilson:

Okay.

Corning Painter:

Yeah. I think that having come into this company, talking about it, I think the industrial logic of doing this has never been more clear. And yeah, we'll see where this can go. I think also from our perspective, we don't want to do a lot of talking until we have this done. We're very pleased to be where we are in South Africa right now. And we'll see if the current environment does it. I think the immediate priority of customers though is just a mad scramble for 2023 and wanting to lock that down quickly.

Wendy Wilson:

Okay. Two related questions on capital allocation. Given the free cash flow generation outlook, why have you not been buying back shares? And what's the highest level of net leverage that you would like to see?

Corning Painter:

So, first of all, let me just say we discuss capital allocation and specifically items like buying back shares probably at just about every single board meeting. It's an active topic of discussion. We've had guest

speakers on this topic. It's something that we take really very seriously. I think in some ways the current price compared to, as we see the value is very, very attractive. On the other hand, right now, with energy prices where they are, a war going on nuclear threats, all of this, it's also a time of some caution to think about holding onto your cash. And as a board, it's just a requirement to think about the trade off between those different items, but that's actively worked on. And I'm sorry, Wendy, there was two parts to that question. Could you repeat for me the other part?

Wendy Wilson:

Yes. What's the highest level of debt we are comfortable with?

Corning Painter:

So, I mean, our goal is two to two and a half. We're obviously comfortable with that going higher. We went higher during the COVID period, that kind of thing. We've never come out with that, boy, we take it to here or to there. For example, if we were going to do a big acquisition or that sort of thing, but you know, this company once had much higher debt leverage. And I think we're not slaves to this two to two and a half range, but that is our targeted range. Jeff, anything you'd like to add to that?

Jeff:

Sure. Actually I'll add to both of those. The first one on the buyback, I think is talked out more than every board meeting in the capital allocation, but I think what's important there is Corning talked about given the high oil prices, the amount of cash that we need to use in the near term from a working capital's perspective. Even with the step up in our revolver that we announced last week, we're being cautious here, because if all of a sudden oil would've jumped 150, 160, \$170 a barrel, it starts to make liquidity a little more challenging. So we just want to be careful there.

Jeff:

With regard to the leverage ratio, you're right. The two to two and a half is what we've announced. I'm always of the opinion that if you're, you want to have some dry powder. If you've got an opportunity that comes in front of you and all of a sudden you need to take that, let's say you're a 2, 2, 2, 3, and you need to take that up to three, for some reason, as an example, you want to have that dry powder. So if we wanted to go to a much higher level, there's got to be a really good reason to do so. Otherwise, being within that range is really helpful because it gives you that dry powder to take that step up when you need it, when there's an opportunistic reason to do so.

Wendy Wilson:

You used to pay a 20 cent quarterly dividend here to COVID. Would you ever take it back to that level based on your cash flow expert?

Corning Painter:

It was a little hard for me to hear that, but I think the question was about our dividend and it was higher before COVID. I'd say right now, increasing the dividend back to anywhere near where it used to be is not really where we see a high priority. We see, as we've outlined, really strong growth opportunities, as well as from our investors, I'd say different ideas on what's the most efficient way to return cash if we were striking that balance.

Wendy Wilson:

So could I read the question to you and-

Jeff:

Sure.

Wendy Wilson:

How do you think about threshold ROIC [inaudible] project?

Jeff:

Question is how do you think about threshold ROIC requirements on future projects?

Wendy Wilson:

Did you?

Jeff:

Corning, did you hear that?

Corning Painter:

So, I'm sorry. Yeah, yeah. I'm sorry. Yeah, so I missed the coordination there. I thought that was a, your question you were going to directly go there with. So, I mean, I think we look for a return on capital that is significantly above our cost of capital, and we've given some indication of what kind of returns we can achieve in our most recent slide deck. And obviously we're looking to optimize that. I mean, at the floor of that with the right kind of contract terms, we could go down to mid single digits, or double digits, excuse me. There's in the 10 to 15 range, but we aim to be above that. Jeff, anything you'd like to add?

Jeff:

No, I would concur that again, the recent, I think the cap conductors project show shows the kind of return that we'd like to see on a significant capital project. We've obviously have some smaller de-bottlenecking and smaller incremental projects that we had very, very strong returns on. Those are the kind of investments we'd like to have going forward. You know, ones that are kind of tied to a hurdle rate, not necessarily as interesting.

Wendy Wilson:

On the heels of your 2030 CAPA settling framing and the desires of customers to procure more product that Texas is available to produce, how quickly could you go above and build another facility?

Corning Painter:

So I think this is referring really to the settling opportunity, and you can look at the timeframe of the current project and say that's about what you would expect. So it's going to depend on land and permitting, but you're looking at a 24 to 30, maybe 36 at the outline kind of timeframe. I don't know. Sandra, anything you'd like to expand there?

Sandra Niewiem:

Yeah. I mean, you covered it well, Corning. It depends on the right feed stock partner and we are in discussion with several partners. So it could take the time. In addition, I mean, an alternative is also, and what we also market to our customers is to provide furnace based additives.

Wendy Wilson:

And actually that was our last question in the queue. If anyone has any other questions, we'll stay and answer them for you. But Corning, do you want to say anything in closing?

Corning Painter:

Well, look, we really appreciate your being a part of this. I wish so much I could be there in the room with those of you who came down to the NYSC today. Thank you for that. Thank you for everybody who's joined us virtually. This is really an exciting time for us, and I hope that came across in just the magnitude of the opportunity and how we're finally through some of those mandated spending. And at the same time, finally being able to grow our EBITDA with some of these growth investments coming online and just the combination of those just really make for a dramatically improved situation for us as Orion. So we're excited with that. We hope you are, and we invite you to be with us for this journey. Thank you all very much.

Jeff:

Thank you.

Sandra Niewiem:

Thank you.