

Noelle Dilts, Analyst, Stifel, Nicolaus & Co., Inc: Thanks everyone for joining us again this afternoon. I'm Noelle Dilts - I'm on the industrial team here at Stifel and we are fortunate to have next The ExOne Company. John Hartner is here who was recently elected CEO. He became CEO in May. He actually joined the company as COO in November of 2018 and prior to that he has a very long history in the industrial world. John we are happy to have you and we really appreciate it.

John Hartner: Thanks Noelle. Good morning everybody. Thank you for joining today. I appreciate it. We have some slides and we may have some hard copies coming at some point during the presentation.

Please be sure to note the Safe Harbor Statement here on slide 2.

I'm going to talk about how ExOne is distinctively positioned in the industrial 3D printing space, why the industrial space is driving the future, how we came to have a sweet spot in that market, and why we believe we are going to be able to take advantage and grow consistently for a long period of time.

The growth has been there already. We have been growing in the mid-teens for the last few years and expect the growth to continue in the future. We are also getting to a scale where we can drive positive EBITDA in the future.

The key investment highlights I want to talk about relate to the additive market. The additive market overall has gotten larger with consistent growth, in particular on the industrial side. That's the space in which we are focused. We do not do the plastic toys. We are focused purely on industrial customers. Later, I'll talk about the sectors in which we participate.

The position we have is excellent because our technology is oriented not just towards industrial, but also towards production elements. We are participating on a global basis. We have operations in the U.S., Germany and Japan. We have operations in all the key elements and key geographies driving the future of industrial additive adoption. Our focus has been on transitioning from growth to profitable growth, and that is a big distinction for us over the past.

We have been in business for a long period of time. We were one of the early players in industrial binder jet printing and we have been growing consistently. The scale we have achieved now allows us to focus on positive EBITDA. We achieved that in the second half of last year and are guiding towards that for full-year 2019.

The other element we have is significant insider ownership, which obviously aligns the management team with investors. I and other key members of our management team are part of that, and we continue to be oriented towards driving shareholder value.

Today, we'll talk about our strategy to continue to accelerate growth, and we'll continue to communicate that.

Let's get into some detail on these particular highlight areas - first the market itself. The market for additive, and there are a number of consultants out there who predict it, has hit about a \$10 billion and is growing in the low 20% range. As you can see on slide 5, predictions for the future have similar growth rates, probably up a little bit. Why is that curve up a little bit? Primarily because of the production side, moving from building a couple prototypes to doing tools or doing lot sizes of 50 or 100 parts. That change is what's going to drive growth at a slightly higher range in the future.

Slide 6 is a great slide from one of our investors. They do a lot of analytics around the market. They're very bullish on the 3D printing market. I love the graphics. They divide the 3D printing market into prototypes, molds and tools, and end-use parts with the size of each market. The potential size is depicted by the green bars. Since its inception in the 1980s, the 3D market had primarily been about prototypes. That's what most of the early players focused on. That prototype market is well penetrated

at 40-50%. If you ask almost any major company if they have 3D printing, they likely use it for visual prototypes, or maybe a couple functional prototypes to get started.

Molding and tooling in the middle of the slide, is a slightly larger market with about 6% penetration. This market is where we have participated in the past, where our technology is well suited.

The rightmost column, end-use parts, is a \$500 billion market with less than 1% penetration. We have been at this for almost 25 years. We do some prototyping, but the reality is our customers are more oriented towards tooling. I would say tooling is about 70% of our business. Direct volume production is the side of our market that is growing most significantly.

Let's move on to slide 7 to discuss the advantages of binder jet printing. I have mentioned binder jet printing, or "binder jetting" as it's called, which is one of the eight main technologies. Whenever people look at additive manufacturing, just like various CNCs or machine tools, there are various types of additive manufacturing machines and systems. Binder jetting has a lot of advantages when it comes to scaling and using a broad range of materials. You can see by the diagram, we participate in sand, that's used mainly for tools and molds, as well as ceramics, metals, and then also the technology is extendable into the plastics realm. But we don't participate in the very competitive plastics market at all.

There are other players joining this marketplace. Some are private companies that have been well funded through venture capital - a company called Desktop Metal, right here in Boston, has attracted significant venture capital because of the benefits of binder jetting moving into production. A few years ago, HP entered on the plastics side, and then in the last year announced they're moving into the metal side. That is great validation of the opportunities in binder jetting. It's actually great marketing for us. These companies are spending a lot of money on the market.

On this slide, you can see not only the broader range of materials that are possible, but also the scalability. On the binder jetting side, a lot of times people in metal are using laser, or people talk about the powder-bed technology, these are companies like SLM, a public company, Concept Laser which was purchased by GE, or EOS, a private company, doing parts that are smaller than a shoe box.

We can do parts as large as a conference table. So there's a vast difference in the scalability of the technology. We are capable of doing parts that are quite large. Whether it's one large part, or whether it's thousands of parts in a build box, we can actually scale this business to production oriented volumes.

Lastly, the manufacturing cost is dramatically lower. A lot of our competitors talk about 10x lower in price. Our materials are much more mainstream. They're not specialized like the laser powder bed fusion for metal. That metal powder, also called "MIM powder" for metal injection molding powder, is very common in industry. It's an open platform. We capture the binder part of the process proprietarily and then the powder is either purchased through us or through open sources.

Let's move on to slide 8. What is binder jetting? The technology actually allows you to spread layers of powder. So just like 2D digital print, 3D is layering up the geometry you want to achieve. We spread a powder and then we actually inkjet. Inkjet is very scalable. It's almost like some of the semiconductor wafer-based processes, very scalable. So we go across it as many times as needed, in a single swipe or in multi swipes, and then bind those powders together. Those powders then would come out as a finished tool, or mold, or you would do a post process to sinter that metal powder into a final metal part. Again, the technology is something that's been around for approximately 25 years. We were one of the early inventors, in conjunction with MIT. We were the two primary inventors of the technology. We have a license from almost 20 years ago.

Moving on to slide 9, let's talk about our business units.

When we describe our business, one area we talk about indirect printing. This is where you're not printing the part itself, you're printing a mold. That mold, many times, would be based using sand or other ceramics. We actually have people using other organic materials, waste products from other industrial processes or even food processes. Very interesting that you can create a core, or a mold package. A lot of our customers in this space are large industrial companies. Customers like Caterpillar, or John Deere; customers in the automotive space like BMW or Volkswagen; and then customers in the aerospace area, Sikorsky and other aerospace companies. What we can do with 3D printed molds compared to traditional molds is make those molds lighter, more complicated, and with higher performance levels.

One example in this particular space we recently published working together with Sikorsky, our tax dollars at work. Traditionally, the main rotorcraft gear housing for their helicopter was about a 16-month lead-time. We were able to cut that down to less than two months to deliver that product. The product they designed was 30% lighter, because of our ability to do things with 3D printing, and 10% stronger. That output is what's causing other companies to look at this technology and adopt it.

On slide 10, we talk about the direct printing side of our business. These tend to be smaller parts, but you can see some of the many different materials we are using, whether it's standard stainless steels, tool steels, Inconels, coppers, other products. The customers are coming to us across a wide range of applications here. We probably have the broadest range of material set of anybody in the industry, and customers come to us for that material expertise, that application expertise.

You can see some of the unique applications, whether it's a part for an automotive or industrial motor, whether it's collimators, for things like different sorts of processes, filters, et cetera. There are an endless range of possible applications in this space, and the markets are very diverse. We are really not tied solely to automotive. We are not tied to aerospace. We are not tied solely to oil and gas. It is very broad. We sell some of our stuff into the education areas, but really key markets for us are going to be industrial equipment, energy, oil and gas, aerospace, automotive - very broad. So that does not create any concentrated cyclical from the standpoint of our particular end markets.

On slides 11 and 12, you'll see we have a broad installed base. We have been in the business for more than 20 years. We have nearly 300 machines in the field, and our machines tend to be between \$0.5 million to \$1.5 million and they are long life machines. We have customers that have machines that are almost 20 years old. They continue to use them. It's not a function of the machines wearing out, it's a function of new technology, new speeds, new accuracies that they're going to go after and use in the future.

The nice thing about that installed base is that those customers are not just single machine customers, we are increasingly getting customers who have double digits of machines that are moving up and adopting this technology to be completely digital, as opposed to partially analog and some digital.

Moving to slide 13, what are the strategies we are using to go forward and to grow the business beyond where we have been or to improve our margins? Over the last six months I visited a lot of customers, talked to our people, looked at what's going on competitively, and there are three main strategic pillars. We'll continue to build this strategy out later in the year and we'll talk in more detail about that. The three main pillars are, expand our customer and application focus, extend our technology core and execute on recurring revenue growth.

Why are those pillars important? On the customer side, we have great machines and the customers are using them in some mainstream applications, but there are a lot of extremely high value applications where we can bring in our expertise and advanced materials and solve a problem that they just could not solve before.

I'll talk about some of those. Those customers tend to buy parts or come up with parts that may not be a \$5 part, may not be a \$50 part, may not be a \$500 part, but we are doing \$5,000 parts for them. That is the type of customer who has significant value to be derived from working with us exclusively in these relationships.

We are also expanding our sales process. One of the first people I added to our team was a Chief Customer Officer. This is somebody I had known, who'd been very, very successful in the 2D digital world and had spent time in the 3D digital world. So we are expanding our customer channels and our coverage in the marketplace. We anticipate that these things will not only help our growth, but improve our margins.

In the middle of slide 13, we talk about expanding the technology core. In the 3D printing panel here at the conference yesterday, we talked a lot about what's holding the industry back. There are a couple of different things, but one of the things that's our responsibility as suppliers to the industry, is continuing to drive lower cost of ownership. Our ability to make our machines faster, more reliable and with more output, will broaden the application base. I came from the semiconductor capital equipment industry. We had to do this every year if we were ever going to hit Moore's law. I had customers like Intel that wanted me to do more for less, or more for the same most of the time, and that was the model.

I think this industry has the exact same potential. When we were focused on prototypes that may not have been the push for that, but as we move to tooling and move to production, we have to adopt the mindset to deliver this sort of continuous improvement of cost of ownership. Part of the way we want to adopt that, and actually have that happen within our Company, is to be more modular.

Right now as a Company, we have six different types of platforms that have six different types of subsystems of various sizes. Our view is we can actually create certain critical subsystems that can be used across all of our platforms over time. That makes it better for our engineering focus and also for the customer. We see that as an evolution that does not happen overnight, but that will drive both higher reliability and more productivity for the customer.

Moving to the rightmost column on slide 13, we touch on the importance of recurring revenue. Oftentimes for companies, it's exciting to focus on the million dollar machine, the big machine is very visible. But the best thing I learned when I worked in digital print, and starting in the 2D world, is the alignment you get by actually installing precision equipment and then ensuring that equipment continues to run at high productivity levels. Then you get recurring revenue, the customer gets happier, they buy more machines, and it's a very virtuous cycle. We believe that's possible if we spend more time focusing on customer success. I'm expanding our capability within the recurring revenue world, and that also reduces volatility. Million dollar machines, those are exciting, but maintaining a customer relationship that delivers \$100,000 of recurring revenue every year no matter what is a nice thing too.

Let me talk a little bit about some of those specific value-added applications. In this particular case, we are using our indirect technology where we print very large-scale sand molds or tools. We are moving from just doing tools that are used in foundries for casting into molds that would be used as a washout product within carbon fiber ducting - carbon fiber structures for the aerospace and the automotive industry primarily. This is a business that is brand new. We had the idea for a while, but we literally hired a sales guy just five months ago and have started to get business already.

Moving ahead to slide 14, the opportunity on the left is a Sikorsky opportunity working with their new CH-53K, I believe it's called the Sea Dragon, the heavy-lift naval helicopter. This is a product which actually has all the ducting inside this helicopter. You can imagine when engineers design things like planes and helicopters, they think about how do I get flight? But they're not necessarily worried about

moving air around right away. That tends to be the most complicated thing. How do you move air through that helicopter cabin and into certain critical cavities within the engine compartment?

The ducting in that helicopter is carbon fiber and it is very complicated. The tooling we print for these helicopters is washed out afterward. It's a mandrel that would be washed out after the carbon, comp tooling is done.

Looking at the picture on the bottom right of this slide, we have done the same thing in the automotive space. Most of the NASCAR teams use this. We have one or two NASCAR teams that are starting to use our tools. On the bottom right of this same slide 14, this happens to be a Formula One from UT Austin that we use to promote our technology. The nice thing about this - at this point it's recurring revenue. We are selling these mandrels and toolings on a regular and ongoing basis. Every time they use a mandrel, it's washed away. So we need to build another one. Also using our sand printing technology, again our scalability is quite large.

On slide 15, you see an example from inside of our own Company. Just last month at a trade show, we introduced a new machine, the X1 25Pro™. Five months ago, I talked to the supplier of the tooling for the plastic covers around this machine. The tooling was going to cost me \$1 million for hard tooling. So we said, can we do this with our own sand printing and then actually infuse it with a material that would allow it to have thermoform covers on it at large scale?

The answer seemed to be, yes. We were able to produce the covers of this machine within a month, as opposed to six months, for one-tenth the cost. We are just starting to sell this outside, so again, it's a new application, something we had not done before - very cost effective compared to hard tooling. I'm not going to get as many parts off of this, but I will get about a 1,000 versus maybe 10,000 that I'd get off the hard tooling. So it's very much a cost effective business decision where we actually are using our own technology internally to deliver our customer's product.

Moving on to slide 16, another new application, many times comes from materials that have not been done before in 3D printing. Silicon carbide is a material that is very stable in extreme temperatures, we are talking about minus 500° to plus 2,000°. These are things that are going up into satellites, going through the atmosphere and holding mirrors and other applications for optics in military satellites.

We have received funding from the Missile Defense Agency. That's actually helped us to develop the process on binder jetting machines. We continue to move that MDA process that was primarily for the original development into early machine parts that would be used in real applications and volume applications in the future, so again, another example of high value application.

On slide 17, Extend the Core - Direct. The covers you see here on our X1 25Pro™ were formed on the tooling I described briefly just two slides ago. This uses the same technology we introduced two years ago, but scales it up. Our last technology had about 100 cc's per hour output, this has 3,600 cc's per hour output, quite a dramatic scale up of the process. The nice thing is, as I talked about earlier, this is really oriented towards production and we are not doing this alone. We co-launched a material partnership program such that metal powders companies like Sandvik, Kennametal, and some of the other early users of this, and we are qualifying their powders such that customers can move this into an open platform for materials and can move into real serial production.

Beyond those beta customers, we do have our first serial production customer order, somebody that was already using our equipment in the past that believes in the future and continues to drive new volume through their processes with 3D printing.

Slide 18 touches on extending the technology core on the indirect side. I do not have a lot of detail here, but in two weeks, there's a trade show in Dusseldorf, Germany called GIFA. This is *the* foundry

and casting trade show. It's once every four years. We are introducing some really revolutionary technology that's going to do three main things.

First is continue to drive down cost of ownership, so more from the same price, which actually broadens the adoption base.

Second, it's integrated with Industry 4.0. We talked about that on yesterday's 3D printing panel and some of the other additive manufacturing folks have talked about it in their presentation. This will be completely linked to the cloud and allow customers to interface this with their factory systems of the future.

Third, broaden the range of materials they can use in these platforms. We had certain limitations for certain machines and this is a multi-material type system that will help us move those customers to a more flexible platform.

Moving to slide 19, we get into more detail on the recurring revenue strategy we touched upon on slide 13. This is the strategy where we capture more of the consumables from the customers. It provides a steady stream of revenue across all of those installed base platforms. We are investing in this and we will come live in August with the Salesforce service cloud. Again, we'll be tracking all of those 300 customers who currently have our machines, understanding how well those machines are running and how quickly we can actually respond to them to ensure they continue to run at a high performance level, and we will capture the consumables coming from those. That is an area where we will continue to see growth, as well as expanding some of the capabilities we have exclusively in North America to other geographies like Europe.

On the financial side, let's turn to slide 21. I talked in the beginning regarding how we moved from growth to profitable growth. Some of that resulted from decisions made last year when we modified the executive structure and restructured some of the expenses we had. We took those decisions midyear, last year, which resulted in us having a positive EBITDA in the second half of last year. We continue to explore strategies to efficiently deliver value for the customer without overspending. Again, growth is important. We continue to expect the growth will be in the mid-teens, but we want to have positive EBITDA and that's what we expect.

Looking at slide 22, growth in the prior years was in the mid-teens and we expect that to continue. We were about \$65 million last year and we expect mid-teens kind of growth this year. Fourth quarter was a monster quarter for us, so we had guided to our first quarter being lower than prior year and we anticipate seeing some real positive views in Q2, Q3 and beyond.

The other thing on this slide I'd like to point out is that even though our first quarter was down, gross margin was significantly up, showing that expense modification was not just in the overhead functions but was across the board. We also continue to drive more value for our customer and we are seeing some of that on the pricing side.

On the backlog shown on slide 23, you can see it has moved up and we continue to have good order flow. That order flow and backlog are going to continue to power us through Q2 and Q3 and into the end of the year.

Operationally, we have a lean process that's moving the cycle down. It used to take us more like four to six months to process and install a system. Again, these are very large systems. We are moving that down to a few months and that improvement is one thing that will allow our backlog to stay at a moderate level but actually turn faster.

We continue to do more with less. We have efficiently managed our R&D and SG&A as you can see here on slide 24. Some of the reductions you see quarter-to-quarter are a result of cutting some of the external expenses and consultants we had running as part of our business in the past. That improved cost structure will help us drive the positive EBITDA.

Taking a look at slide 25, liquidity, we are still in the range of \$20 million of liquidity, comprised of both cash and a revolving line of credit. As you can see, we have very, very low debt.

Finally, we talk about guidance on slide 26. We anticipate maintaining mid-teens growth rates. From a half year cadence standpoint, if you look back three to five years, we have about a 35:65 split of our revenue, first half/second half. That's how our industry and machine tool equipment works. We install quite a bit in the third and fourth quarter and we expect it to be that way this year.

The increased leverage we have talked about, because of the business model adjustments we made last year and the increased efficiency, will deliver positive EBITDA while maintaining our R&D investments.

In the years beyond, we anticipate ratcheting up our growth rate based on the strategy we have talked about it here today. But we are focused on profitable growth, not just growth, and we are excited about delivering that as we move forward into the future.

Just to reiterate, additive is a great and growing market. We are in the sweet spot of that on the industrial side, particularly because of our technology. Binder jetting is the place where customers across any one of the large users are looking at this to move from prototype, to tooling, to volume production. Our Company has a history of good growth in the mid-teens. We are going to maintain that growth but be more efficient about how we spend our money and watch our margins such that we will deliver positive EBITDA. The alignment we have with guys like myself and other members of our team is what is going to ensure we achieve that and have long-term success.

So with that, let me open it up to some questions from the floor here and we'll try to address any issues.

Q&A

<Q>: Regarding the mid-teen growth target that you laid out versus market growth for additive that's a little bit higher than that, is the difference just the people in the market that you are playing in and what you target?

John Hartner: The question was related to our mid-teens growth rate relative to some of the other market projections, which tend to be in the low 20s. Is it a difference in the market? The answer to that is absolutely. There are parts of the business, like service business continues to grow relatively fast, plastics has been around and been probably more penetrated and probably growing faster, metal is starting to grow and I think that's a place that's going to help us grow faster in the future. That's why our guidance says we are going to grow mid-teens now, but we anticipate seeing that accelerate in time.

<Q>: And then you talked about some other folks coming in and bringing in other technologies. What do you feel is your mode of these kinds of trends as you look at your position? And is there an advantage to having been using binder jetting for a longer period of time?

John Hartner: The question was, I mentioned there's new people coming into the market, competitors, some of them larger. What's our mode? How do we win in the future?

So yes, the new competitors coming in are actually good for us. They are spending a significant amount of marketing dollars to educate people, and add credibility to binder jetting as the technology of the future for production-based 3D printing. That's a real positive. All of these companies are brand new to it. The challenge, even though the process of ink jetting on powder does not sound so difficult, I can tell you it's quite difficult and our accumulated knowledge, our breadth of knowledge on the range of materials that we have capability to print and sinter and process, gives us a significant leg up.

I can tell you there are a number of customers who may have looked at some of these new entrants and said, "I saw their parts at the trade show", but they come back and buy from us, because the quality of what we have and our ability to reliably deliver. Our large installed base is also an advantage. So thanks for that question.

<Q>: So just looking at your press release, and there's the line item that I have not seen from too many companies –the contract liability and it was a meaningful source of cash from December to March, what is that?

John Hartner: That's advance payments. Again, our machines are quite large and it takes them a period of time to get out there. I can clarify for sure, but it's primarily advanced payments from our customers who are paying somewhere in the range of 30% to 50% of the bill right on order, and prior to shipments we normally have up to 90% of the payment. That actually adds to our cash flow at this point and particularly when we talked about the change through the year. So it's a good time for us right now.

<Q>: [Question Inaudible]

John Hartner: Yes. So the question was from a production capacity, how many machines do we produce or have capability to produce?

Firstly, when we went public, we did a nice job of building out our infrastructure in anticipation of the future growth. We are not capacity constrained in any way, shape, or form. Both our facilities in Germany and in the U.S. have capacity to more than double our output at this point. It depends where we talk about the number of machines. We probably are shipping somewhere between 50 of the direct machines and maybe a few less on the indirect machines because they're much larger per year.

So we have capacity to more than double without incremental capital dollars. I think most of you would look at our capital expenditures, and when compared to other players it's quite low. We did spend it at one point in the past, but that actually is what we can use to continue to grow and so that helps our ability to grow in the future. Thanks for the question.

John Hartner: I think we hit our time. So thanks everyone for joining. I appreciate it.