

Ultrasonic Range Finder Manufacturing



Bob Gross
CEO

CEOCFO: Mr. Gross, what is the idea behind MaxBotix Inc®?

Mr. Gross: We manufacture ultrasonic range finders. They measure distance to objects used in a variety of applications, such as trash levels, people detection, is there a car in a parking lot, did a vehicle pull up to a kiosk or did a person walk up to a kiosk or how much water is in a tank. They were used on some UAVs and robotics applications also.

CEOCFO: Would you please explain measuring garbage?

Mr. Gross: Our sensors are being used to measure how full a garbage container is. Then the truck gets cold once it is so full. That allows municipalities to have about one third less trucks emptying garbage. It also helps to service the full trashcans quicker, so they end up having better service with less people.

CEOCFO: Is it fairly common to use sensors of this type in the areas that you service or is it a more modern technique that has not hit critical mass yet?

Mr. Gross: In the last few years the garbage thing has taken off. I believe it is because of the low prices with a quality sensor. Now our customers do not need to spend \$600 on a sensor, but are getting a sensor for \$60 so that they could put them everywhere they want and have them work properly.

CEOCFO: What other areas are people taking advantage of and what other industries have come into play for you as cost dropped?

Mr. Gross: Parking garages have a sensor over every car in Europe right now. They have a display showing how many spots are open on which floor. Sometimes they have a series of lights or LEDs above every spot to try to guide the cars to the open parking spots. In Europe they do not have enough parking for the number of cars or they have the exact number of parking for the cars. Therefore, they end up needing to do that. In order to do that they have to put a sensor in every space. A sensor in every space is cost prohibitive if they are expensive.

CEOCFO: Why would someone want a MaxBotix sensor?

Mr. Gross: As far as we know we are the lowest priced sensor and we are quality, so we are doing both high quality and low cost. Therefore, we end up shipping at high volumes. We are a good high volume producer of quality sensors. We have done that for years.

CEOCFO: Are people who are purchasing aware of MaxBotix? Are they aware of the industry or are they basically looking at price or availability?

Mr. Gross: We are on the front page of Google where you will see pictures of our products. If you put in ultrasonic sensors in Google the same thing happens. We are there. We did not hire a search engine optimizer. We did not do any of that. We are just naturally there. We are there for a reason. I believe that is because we are very popular. Therefore, we ended up not being in business as long as many of the entrenched sensor companies, but rising to the top in that area. We are not always number one. Sometimes we are number three or number five, but we are on the page, usually multiple times with our distributors or us.

CEOCFO: What is your geographic reach today and do you see that changing? Are there areas where you see greater opportunity?

Mr. Gross: We have over one hundred distributors in thirty five to forty countries right now and that is only increasing. We started in the education market and branched into the industrial market. Therefore, because our prices were so low I think that we had some hesitation in the industrial market at first. Then as people started using us they found out that we work great, so then we are in tens of thousands of installations. However, at first we had that, "This is too good to be true," type

of reaction. Now we are just an industrial sensor. We are used for the applications. People will buy six hundred for a test run, and then they will put ten thousand of them or twenty thousand of them into the field. Therefore, we end up being chosen now, regularly.

CEOCFO: *What is your sales and distribution model? Do people find you or do you have an aggressive sales approach?*

Mr. Gross: We are not pushing in our sales. Let me just say this. People find us. That is really how we operate it. We have gone to trade shows and done well there. However, in general we are not doing cold calling to businesses, trying to sell our sensors. People are finding us. They are looking for an application. Our sensors are mainly components. Not all of them but most of them are components. That means that an engineer will design them into a product. An engineer will design them into a kiosk. An engineer says, "I want to monitor all of the tanks in this area." Therefore, we supply the sensor and they supply the electronics to read it and to do all of that stuff. We do have some that are easy to use, USB, that have made their way into kiosks and such, so they are more refined and easier to use. Many of our sensors are easy to use, for example, they are used by FIRST Robotics teams. We donate thousands a year to those teams. However, they are easy to use, but yet they are packaged in such a way that they cannot be used without some engineering.

CEOCFO: *How do you decide when to add something to the product line and when to take something out?*

Mr. Gross: We have been constantly improving our products. We started out with a one inch resolution sensor and then came out with a one centimeter resolution and then came out with a one millimeter resolution and then started increasing the range. We get inquiries and then we decide, "Is this something we can sell at high volume, is it something that people want in high volume," and that is how we make the decision. Then we will develop a product. Typically we develop a product because we see the industry, but occasionally someone will say, "I want this product developed," and we will do that for them also. Therefore, we have developed a number of custom solutions as well as looking at the industry and saying, "where is there a hole." Then we fill that hole.

"The number one thing is to have great systems in place; great prediction systems, great manufacturing systems, and continuous improvement. If you do not practice that then it does not get better. It gets worse. We practice continuous improvement, and because we have grown so fast every year we always have to add more or make this faster or make this better. That has just become a part of our life. You learn that you are always learning." - Bob Gross

CEOCFO: *What is the key to maintaining inventory, keeping control and not falling short of a product?*

Mr. Gross: We end up predicting everything on spreadsheets; how many did we sell last year, how many did we sell the year before and every month. We look at all of that and then have a spreadsheet that says this is how many we are projected to sell in the next few months. We have actually been growing quite rapidly and that growth usually causes us to exceed our projections. We expect to make the Inc 5000 list this year. We are planning to be on that list at the least. We do not know though, until another month, I think.

CEOCFO: *Why is this a year of such growth? What has been different over the last year for you?*

Mr. Gross: We have been doubling almost every year. Not quite every year; sometimes we grew seventy percent. One time we got squished because our building was not large enough. We were not able to double that year or have any growth. We just moved. Therefore, we ended up moving to larger and larger facilities every couple of years. Then in 2012 we ended up acquiring a twenty two thousand square foot facility. Now we have been growing in that facility. We are using ten thousand square feet of that right now and we are looking to expand to the next twelve thousand square feet, possibly this summer or for sure next year.

CEOCFO: *Where is the facility?*

Mr. Gross: It is in Brainerd, Minnesota.

CEOCFO: *People say that you cannot manufacture at a profit in the US. How do you do it?*

Mr. Gross: You do have to look at your costs. One of the things that we do not allow; and this is going to sound counter to the whole industry, and that is that we do not have Net 30 terms. I know that sounds weird, but everyone pays for their own stuff. If you are going to place an order for ten thousand units you are going to give me so much money down and then I am going to build them for you and then you are going to pay me as I ship them. Therefore, I eliminate the risk of nonpayment. I eliminate the collections area and the overhead from that. That is probably the biggest issue. That whole bullying and payment and being sixty or ninety days late on payment; I do not do business with people that require that tactic and I am okay with that. We have, to date, lost maybe one customer since the beginning.

CEOCFO: *Did you realize from day one that was how you wanted to run your business?*

Mr. Gross: That is how it was from day one; absolutely. Then the other side of it is to look at the market. What can you build at high volume? That is, because you can build at high volume, inexpensively, anywhere. You just have to have good processes, good systems, and automate whatever you can. If you do that you can easily compete with China.

CEOCFO: *What have you learned about the company or about how to do business as you have gone along? What is different today than it might have been three or four years ago for you?*

Mr. Gross: We have been growing. The number one thing is to have great systems in place; great prediction systems, great manufacturing systems, and continuous improvement. If you do not practice that then it does not get better. It gets worse. We practice continuous improvement, and because we have grown so fast every year we always have to add more or make this faster or make this better. That has just become a part of our life. You learn that you are always learning. You have never read enough books. There might be a new machine out there today that was not out there last week or last year that you want to look at again. You never coast.

CEOCFO: *Why does MaxBotix standout? What is the company exceptional?*

Mr. Gross: We started always honoring God first. If you read our newest brochures and stuff, we talk about that. We honor God positively by impacting the lives of our vendors, employees and customers in our community. We try to pay good wages and we do. We desire to be a world class leader and to do that we have to have great systems. We want to be a customer centric company of first choice. Therefore, we listen to our customers. There is also integrity and innovation and we use emotional intelligence a great deal with our employees; understanding why people do what they do and who they are, because not everyone is the same. It has been a lot of fun to have a company!

Interview conducted by: Lynn Fosse, Senior Editor, CEOCFO Magazine



MaxBotix Inc

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