

Company Name: MTS Systems Corporation (MTSC)  
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<<Unidentified Analyst>>

Great, thanks. Welcome to Industrial Conference. We're happy to welcome MTS today. MTS is a leading global supplier of high performance test and measurement systems and sensors and related services solutions help researchers, engineers and manufacturers improve product performance and reduce time to market.

With me from MTS is Jeff Graves, the President and CEO. I'll turn over to Jeff.

<<Jeffrey A. Graves, President and Chief Executive Officer>>

Thanks. Joel. And with me here is as well as my – our CFO, Brian Ross, here in the front row. Like any engineering company, I've got about 3000 slides to show you with really small font. So I'm only going to hit about three of them and give you just a kind of a high level overview of the company what we do for a living. For those of you who may know MTS, I'm very happy to answer any more detailed questions for you. Our fiscal year ends at the end of September, so we released earnings here in a couple of weeks. So we're in a quiet period for the end of our fiscal 2018. But again I'll just stick to an overview of the company and then if you have any detailed questions I'm happy to take them.

So MTS, we've been around 50 years. We were founded up in Minneapolis, Minnesota. And its still our corporate headquarters as well as the center for our test business. And as Joel mentioned, we're comprised now of two business units. We've been in the testing business, but he testing equipment. I'll tell you what that means in a few moments for our full 50 years. About 35 years ago, we got involved in industrial sensors and had grown up in one specific technology. And a couple of years ago, we did a large acquisition in that space.

So now we have two business units. In total, we're about \$800 million in revenue and the revenue splits shown in the bottom right of this chart. So its about \$65 million, \$35 million, you can say slanted toward the test business a little bit bigger in terms of revenue, in terms of EBITDA performance or profits, they're about even now. So sensor business obviously very, very profitable business for us and growing very fast, and again it is focused on industrial sensors.

And when I say test, what I mean by test is really a broad term for equipment that has new products from the full scale vehicle, which can be a car, a plane, a train to the components that go into that vehicle, all the way down to the materials that make up the components. So we make the equipment, the software controls and control that equipment. Historically, we would test an article to failure more and more these days we're testing things in a simulated real world environment that measures the performance of the product.

So test is kind of morphing into a test and simulation business now. And sensors are just what they say, sensors for industrial applications, not automotive. So we have go-to-market typically as the technology leader in our products. Our customers are the major universities in the world virtually every continent. They are automotive and aircraft OEMs that are designing and building new products that are equivalent to use to test. And they are all of the Tier 1 and Tier 2 suppliers for those components, as well as industrial automation companies that are automating equipment using our sensors for measuring position, vibration, acceleration of robotic systems and other industrial metal bending, metal cutting, laser motion systems, things of that nature.

We are a technology leader in what we do and generally people buy our product for its precision is quality. If you think of what we do for a living, whether its testing a new aircraft, for example, make sure that the new design of the next jet from Boeing or Airbus is going to stay in the air during turbulence and things. You want to make sure the test is very high precision. You want to make sure the equipment runs over the three-year duration of a test like that. And you want to make sure the quality of the data you get out is very precise for the 20 to 30 year life of the test system.

Okay. So we generally go to market as a leader in that field for what we do. So high precision, high reliability testing, and then we have an opportunity to upgrade the equipment over its 20 or 30 year life. Same with industrial automation, our sensors allow machines to be more precise. I give you an example like the lumber industry. Our sensors would measure the position of a saw blade and by controlling that position very well, you can eliminate waste and in terms of saw dust, when you catch one of the leading costs leakages if you will, if you're a lumber company, things like this, it's very high precision for industrial automation, position, vibration, acceleration.

We tend to be – we are very much a business to business sales company. We send – we are an engineering company, we're comprised of about 80% of our employees or engineers around the world and we sell to engineers in the laboratories that are developing new products or doing research. So our customer base is very much engineers. They appreciate the quality and technology level that we provide.

I always like to think, how does your customer get fired? You want to make sure you protect them from that. Right, our customers only get fired, if the test fails. So they're incentivized to make sure they buy the best equipment, they buy is going to last, it's going to give them good quality data. Because the test engineer, the only way to follow loses a job. It's not by the design of the product failing, it's by the test itself failing if you will.

So we're very good at that. We've been doing that for 50 years, we service OEMs and university labs around the world. In fact, this chart shows our geographic distribution of revenue. We're a U.S. founded company obviously, in Minneapolis, Minnesota. Very early in our life we opened offices in Germany and Japan, so we started growing up in Europe and Asia. We expanded from Japan pretty quickly into Korea and then into China. We've been in China for over 30 years.

So if you look at our revenue split today, it's very robust for us, for a small company. We are 35% of our revenue is derived out of the Americas, predominantly United States. 40% now is

derived out of Asia, half of that number is China and if you think about where China is investing its money, it's investing its money and universities and product development laboratories for the automotive industry and for the aircraft industry and then all of the supporting industries into those things.

So as an emerging super power, they want to have an automotive industry and an aircraft industry. They have a lot of people that want to drive cars and flying airplanes. So we provide equipment into those labs to test those new products is that country evolves and the next country in line right behind that, that's emerging now for us is India. India is growing very quickly as they invest in their own automotive industry and their own university system.

So our revenue is – has become predominantly out of Asia, 40% half of China. As China, the other half is largely Korea and Japan. India is an emerging economy for us doing very well and but we still do a very robust business in Europe. And you think about the European automotive manufacturers and European aircraft manufacturers. We do a very robust business out of Europe and their university system. And in fact, if you look at our installed base, the Americas and Europe are the largest and we have a growing service business about \$100 million of revenue today for us is derived out of taking care of our installed base. And to tell you that market opportunity for us, we've been selling equipment obviously for 50 years.

We have sold over \$6 billion worth of testing equipment in our history \$4 billion of is still running today. And our customers are spending \$1 billion a year keeping that equipment running, okay, \$1 billion. We capture today about \$100 million of that, and that's a big emphasis for us growing. So it leads to basically a higher margin revenue stream, customers are happier, margins are higher and a nice very stable revenue stream for us to grow over time, so very pleased with our manufacturing footprint. We're an \$800 million company, I feel really good about this. It insulates us from some of the normal country ups and downs of the world. We operate a very specialized market test and measurement, which sits between the industrial space and the technology space in a very well defined niche. We have very few new players in the market. And the reason is, it's not that the equipment can be replicated today – any piece of equipment can be replicated really quickly. It's the software and controls. So the protective part of our business really is the software controls for the machine. How does that machine control high forces very precisely? And how does it integrate with customer software?

If you think about a car manufacturer and aircraft manufacturer, they spent a lot of money on design tools to improve the speed of their concept design. How do you iterate through a variety of aircraft designs, come up with a basic one you want to build and test. Our testing machine and the software integrates with those design tools and allows them to more rapidly get a product into test and enter the market. The automotive industries reduced its development cycle time from in the old days, 10 years to seven to three and they're trying to go down even smaller now. And the way they've done that is with all of the sophisticated design tools on a computer these days, you can get into a concept fast and then you can get that concept manufacturer for testing and our machine will allow that to link to the tools and test it very rapidly so they can get product to market more quickly.

So I think I've covered this. If you look at the split of our business today, I'll just rapidly go through the test and the sensor splits. If you look at it, about half of our test business today is derived from ground vehicles cars, trains, buses, trucks, and again, we sell testing equipment into the new product labs where those products – those new products are being tested. We're not tied to how many cars are made in the world. We're not tied to the SAR numbers, we're tied to how many new products are being developed.

So you think of electric vehicles, autonomous vehicles, if you go to India, you have automated rickshaws now three wheeled vehicles, four wheel vehicles. There's an explosion in new product design. All around the world it's been very specific in this geography that's 48% of our revenue, so the Tier 1 automotive OEMs, their laboratories and their key suppliers. The other half of the test business, if we divide into structures, which is literally massive machines that would test buildings and bridges for seismic resistance or tsunami resistance.

So if you want to know how well a building does during the next – during an earthquake, we have software that replicates every earthquake in recorded history and a machine that would fill the size of this room, okay. And what sits on that machine is a model building or a model bridge. So you push a button and you can simulate any earthquake in history and how would that new building design withstands the shaking from that earthquake, same with bridges, attest bridges. So when a world of aging infrastructure, it's very nice to be able to take a model of that infrastructure into the lab, test it and see how long it's going to last.

So those are the – that's the kind of work we do in structures. It also comprises our energy business where we test wind turbans and other drilling and piping of oil and gas products. And we also probably the world's best at testing how rocks crack. Let's say, why would you want to know how a rock cracks? Well, If you're in the fracking business and you want to simulate a rock that's a mile underground. It extreme pressures and temperatures, you have to know how the rock cracks in order to extract the most oil and gas from it. So our machines would replicate that or simulate that deep underground experience for rock and you can say yeah, cracks.

Services, as I mentioned is about \$100 million business for us today growing at high-single to low-double digits as we take care of our equipment around the world has been an initiative we launched back in 2013 – in our fiscal 2013 and it's been growing nicely sets. In terms of sensors, I love the sensor business, it's fantastic. Our sensor business today is about \$300 million in revenue. We do about 20%, 21% percent EBITDA margins in that business today.

It's a very low cap ex business, because we basically designing and assembling sensor products. And again, it's one of the key walkaways is our sensors go into industrial applications, non-automotive applications. There is a lot of sensor technology in cars today, a lot of companies are very focused and then good at it. We are – we don't like those markets predominantly, because they're extremely price driven in the long run. Industrial markets are ones we're much more comfortable with. So we focused on industrial sensors. Our \$300 million business today is growing at double-digits 10% plus rates on the topline.

We're generating 20%-plus EBITDA margins. We just landed a large military contract. The word give us some insurance if you will against probations in the industrial economies around

the world. But we see that business growing at 10%-plus a year for the next five years and EBITDA margins going from the low-20% to the mid-20% range. Just a marvelous business. About unique to us about 40% of the product out of our sensor business is sold to our test customers for testing new products.

So while the predominance of them going through industrial machinery, there is a meaningful percentage that goes into our test markets, which is why we own both businesses. So we can carry those sensors with us into China, India elsewhere and as these new laboratories ramp up and their testing, they can adopt MTS Sensor systems. We make position sensors for robotic systems or industrial cutting machines, beading machines, we make acceleration of vibration sensors.

So if you want to know how machine is doing, when it works, if it's vibrating, if it needs maintenance, things like this, you put these sensors on it. It will tell you that very precisely for a long period of time. And as company is focused more and more not only on preventive maintenance, but on control for efficiencies, then these sensors are used more and more. We focus on the sensor itself and getting the signal out. Others take the signal and process it and do other things with it. Our expertise is the sensor itself, getting the signal off the machine.

We take these vibration sensors and accelerometers, we put them into industrial microphones for measuring noise. Its important factor for a new car, new airplane or noise around an airport, things like as noise in stadiums. We just did the Viking Stadium a couple of years ago when they built that. So anything that measures noise, you can take vibration sensors. Not a huge revenue stream, but its fun to talk about. Its fun to go to a ball game, this is where country, but if you're a Viking's fan, you go ball game and when they show you how loud the stadium is, which is extremely loud, our sensors are measuring them.

and then we put them into turnkey systems for some folks and sell them to – so they can be deployed around the world. Okay. We are okay on time. To tell you about the dynamics of the business at a high level, test is very interesting. Test goes through some business cycles, ups and downs. It's a been a bit extreme in the last year and a half. And it's very interesting situation or if you look at our overall test margins, so test is entered more of a slow growth phase about a year and a half ago and the margins have been under pressure. The reason is very specific. There's a huge number of new cars and airplanes being designed and built today. So there's a lot of demand. The interesting thing is the automotive industry has had to divert a lot of their product development dollars into safety. And if you open up the newspaper you understand why it's autonomous vehicles can't run over people, and they can't run into things.

So the first priority, if you're an automotive company right now and you want to feel that autonomous car, make sure it doesn't hit anything. So they've diverted a lot of their capital investment and the safety, those cars or are scheduled to hit the road. That's not a good thing isn't, to be fielded in 2019 and 2020. So their interests are moving now from safety aspects and that will always be important, but moving from the safety aspects to more of the durability aspects, which is really what our equipments focused on.

We can – we'll factoid, we can simulate 200,000 road miles in 30 days in a laboratory and most cars are designed the last 200,000 miles. Most aircraft are designed to very specific numbers of takeoffs and landings tens of thousands. We could simulate that in about a one month period or one year period depending on the number that they designed to in a laboratory as well, take offs and landings on an airplane. So those are all broadly called durability. That's really our specialty. So we've been – the growth rate margins in our test business have been dragging for about a year and a half, because of the diversion of funds into a safety related issues. That's starting to come back now. So you see a resurgence in the need for durability testing. Just think about if you're a car company and your design fields early, there's huge warranty exposure. So at the end of the day they need to do durability testing and that's really our forte.

So that that business we feel like is entering a good phase of its life right now. It's a good business. Our service aspect of the business has a little more insulation on. Sensor businesses just booming. So if you look at sensor business, this gives you the last few years trend. It is both organic growth and the acquisition that we did back in 2016. But that business is today growing at double digit rates, that's sustainable. We can see from the next five years organically on the top line. Margins are outstanding and we do low 20% moving to mid-20% EBITDA margins and we see that, that trend continuing over the next five years.

So our test business entering a nice phase. Our sensor business we think is in a nice phase and that will continue and we've never been a big military supplier, but landing this big military contract adds a little more what I've used a little more insurance on the top line to sustain those double-digit rates over the next five years. So industrial economy is doing well around the world and from an industrial automation standpoint and the military obviously is going through a big build of phase in the United States.

So we feel really good about the position of both businesses right now. And again, the lovely thing is we're highly vertically integrated in our key technologies and they were very big barriers to entry for new participants. So you don't see new players coming into the test equipment space or the sensor space, sensors are highly dependent on very specialized technologies. So our approach, we tend to be very vertically integrated in those technologies, we control them very closely and that allows us to stake out of a good high technology position in both of them.

So, again we announced earnings in a couple of weeks if you want to tune in, Dave will update our fiscal year 2018 results. We'll give you some guidance on 2019 and we'll talk about more of these long-term trends that we're seeing right now. But those you walk away, again about \$800,000 million test and sensor business, test is morphing into as much simulation now is testing, a real world conditions, and that's a great trend for us. And sensor is our single, a very large demand in terms of industrial automation and the testing space as well. So, we're excited about the business we're in. We're a very focused company in the test and measurement space and plan to stay that way. And I would open it up to questions. I know it was a high level flyover if you have any specific questions about the company. We have a few minutes left and I'm a very excited.

<<Unidentified Analyst>>

We've got a few minutes for questions. So any from the audience?

## Q&A

<Q>: Great. I went into Jeff that I can start with. Any impacts that you've seen from the tariff situation currently?

<A – Jeffrey A. Graves>: That's a great question. Joel. No, I would tell you, its remarkably, knock on wood, it's remarkably quiet for us. I mean, we've again selling in, we're in a number one, we're in a very niche business. So it's not like we're going to make headlines in the test and measurement space. That space doesn't garner headlines very much. So, if we get sucked into a material from a sales standpoint, it's more by accident than by aim. So, right now we've been – we have a very light exposure in terms of tariffs on the sales side in terms of supply chain. While, you see a lot of companies are being hurt by aluminum and steel prices, our pressures been very modest so far. Our material costs as a percentage of sales are reasonably our brand, it's a percent of materials as a percentage of sales.

<Q>: [Question Inaudible].

<A – Jeffrey A. Graves>: So reasonably high. So say 50%, it's good number, but that included that material costs or fabrication costs, so fix section welding, things like that that are really subject to commodity price changes. So, I believe that probably is why we haven't felt a lot of the commodity price changes per se ourselves yet. So, we are prepared for them and fortunately for us a lot of our work is project work and you can reprice it each day. So, as we feel any pressure from inflationary costs, hopefully we're in a position to pass that along to our customers.

<Q>: Great. And one other question, you've talked a lot about your organic growth. Can you talk a little bit about your acquisitions obviously you were very successful of PCB, but maybe give a little bit about what your ongoing M&A strategy is?

<A – Jeffrey A. Graves>: Thanks Joel. Great question. So, we love the space where intestine measurement is a really nice space, because it's got big barriers to entry. You don't have a lot of new folks coming in. Very difficult to get into this space, because of the engineering content, and we're selling to engineers for a very specific reason. And it's not an enormous market, so it doesn't track a lot of new entrance. We have a great opportunity with our test and our sensor platforms to do bolt-on acquisitions over time. So we levered our balance sheet to do the PCB acquisition Joel mentioned back in late 2016.

We've been delevering sensors, our levers comes down, we see ourselves doing a consistent stream of bolt-on acquisitions to tuck-in acquisitions mainly for the technology that we have a great worldwide salesforce and nice manufacturing base that we can leverage. So as we're bringing more technologies. We can enable a small company to sell worldwide. So that's, that's one aspect.

Also, test measurement are still largely a fragmented business. So it is reasonable to think of doing larger acquisitions over time as well as the balance sheet can support it. So, we're very pleased with that. In terms of capital deployment priorities, both businesses are a low CapEx required business. So we spend about 2% to 3% of sales on capital – on capital investments about half that's for maintenance and about half for growth. So very low cash needs for organic to support the organic growth I talked about. We've paid a dividend for 140, You corrected me this 148 straight quarters, whatever that is, 35 years, we paid a dividend. We never reduced our dividend. We yield today about 2% on the stock. They were very loyal to shareholders that have invested for that. But we have more and more free cash now to invest for growth. And the M&A activity will compete with share buy backs and things over time. We're really excited about the growth opportunities we have quite frankly.

<<Unidentified Analyst>>

Great. Thanks. I think we're just about out of time. So thanks Jeff for presenting. It will be a breakout session momentarily, but thanks for your time.

<<Jeffrey A. Graves, President and Chief Executive Officer>>

Thanks, Joel. Thank you.