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CORPORATE PARTICIPANT

Sanjay Jalona

EVP and Head – High-Tech & Manufacturing and Engineering Services

ANALYSTS

Yogesh

HSBC

Vju George

JP Morgan

Ankit Pande

Quant Capital

Sanjay Jalona

Thank you and good afternoon. My name is Sanjay Jalona and I am standing in between you and the fantastic lunch Pune DC is hosting for us. So I will try to be a little quick but hopefully the bhakarvaris and the local Pune cookies are keeping the hunger pangs down a little bit.

So today I want to talk about two things. First, I am extremely passionate about the intersection of technology and the world of manufacturing. I just want to talk a little bit about what the technology is doing to the world of manufacturing and the second part, I wanted to talk about what we have done in manufacturing, how have we performed, what do we see in the marketplace and how are we taking this tectonic transformation that is happening in the world, to the world of manufacturing to our customers and how are we trying to grow our business there.

This is a safe harbor, I can read it, but I will move forward. The world around us is changing in a very profound way by the world of software, by technology that we see there today. Vishal very often quotes Professor Nicholas Negroponte and his book called Being Digital where he talks about how bits and atoms are becoming interchangeable. What he is really talking about is how the physical world and the digital world are getting very-very close and more or less becoming interchangeable in times to come. Think about it, there is 2.2 mega terabyte of data created every day. If you look at the volume of data, it is doubling every three months in the world. If you look at the data, it's predicted that 40,000 Exabyte of data will be available in the world by 2020. Today the world population is 7 billion people and there are 6 billion cell phones. A modern car today comes with over 100 sensors. So the impact that this massive transformation is doing is quite immense. If you look at technologies like internet of things, 3D printing, robotics, mobility, big data and analytics, artificial intelligence; all of them have a profound impact on the world of manufacturing and there are some fundamental paradigm shifts that are happening in the marketplace. I just want to briefly talk about 3 of them because they have a direct impact on how our customers are buying, what are they doing in the marketplace and how we as service providers and trusted advisors to them need to build capabilities and work with them in a trusted manner.

The first thing that is happening is that it's no longer enough to have a good product. Good product is a given. You need to have a great customer experience. The reason why you need to do that is because of some fundamental changes that have happened in the marketplace. The products are actually helping end users like you and I, be in constant and direct touch with the manufacturers today. The products are always on and products are not only talking just to the manufacturers but the entire ecosystem as well. So let me give you an example, automotive world. In the past you never called up, I don't think I have ever called 1-800 Toyota or 100 Maruti or 1-800 Ford for that matter. But today cars are one place where car manufacturers continuously have captive audience of the driver and the people for at least an hour a day totally to themselves. You are not only directly communicating with the manufacturer but there are sensors in the car which are helping car manufacturers monitor what is happening in the car, where a car is particularly going to fail, what is the predictive maintenance that is required, what can you cross sell, up sell to the consumers. You not only directly connected to the auto OEM but you are also connected to the whole ecosystem. You are passing a Starbucks or a Coffee Café Day you get a coupon there on your dashboard saying, Look, you can go there and there is a sale going on there or you can get a frappuccino for a dollar. So there is ecosystem that has come on totally. Lately, I have read a very interesting article. The car dealerships in the US are starting to experiment with Google Glasses. So over the weekends you normally have a lot of people going to the car dealerships trying to figure out which car I want to drive. But now the agents and the sales guys at the dealership are wearing those Google Glasses and he will go from car to car and actually you can see what cars are available in their lot, what features are there and so on and so forth. So the technology is really

coming on there and we need to be ready as service providers to build all these capabilities, help the manufacturers, help the dealers, help the ecosystem be productive in that.

The second this which is happening is, selling products is not enough, outcome is very important. Outcome is what? Outcome is the products plus the services that go along with it. Let's look at another example of aerospace - airlines, and air OEMs. If you want to sell flight as an outcome, you got to not only sell an equipment but the training, the weather data, the fleet management, the maintenance, everything put together and that is actually what is happening in the market place. What happens here is a typical manufacturer warranty will be there but when you are selling it as a service, the lifecycle maintenance of the product becomes more important. Let me give you another example. The aero manufacturers today get their engines for example from Rolls Royce. Rolls Royce sells them not as individual product but a service throughout the lifetime of an aircraft. From their center in Derby they manage and see the performance of 100,000 of those in the air in real time because of the data that it emits out and sends it to the central station at Derby.

The third thing which is happening is that the traditional models of R&D is actually changing. There is a lot of crowd sourcing. One example that is very often quoted is that P&G Europe incubates 30% new products out of crowd sourcing. I don't know if you guys heard of a beer called Black Diamond which Anheuser-Busch actually took from crowd sourcing and the brew masters brewed a beer called Black Diamond out of crowd sourcing ideas. The second thing which is happening is, there is a continuous feedback that needs to go back to the manufacturers, the engineers because it is also connected. A feedback that you get has to go back, so there is a fundamental change there. Then with the automation that is available, with the simulation that is possible, with the software and 3D printing, etc., the lifecycle of the product has really shrunk and you need to be able to do that.

So what does all this mean to us? It means that the product lifecycle management, the supply chain, the order to cash, the digital technology, sales and ops planning everything is changing for our customers and we need to be able to take these trends and actually help the customers be ready for these things in the marketplace.

Before I talk about how we are using these trends let me give you a quick glimpse of where we are at manufacturing. The manufacturing customers typically are the most miserly ones when it comes to their budgets. Their IT services budgets typically starts from 0.5% depending on the industry and goes typically to 1.5% at times. Normally you would not see a whole lot of service companies where the manufacturing is actually the leading growth for the company across the verticals. We at Infosys have seen a very good growth. Last four years we have gone from some 19.5% to 23% plus of Infosys revenue. We have over 200 customers and we are driving a lot of thought leadership with our customers through various forums. We recently got a Microsoft Supplier Award for market agility because what they were trying to do had failed some three times and what we were able to do in a dramatically short time, has helped their business and helped them be agile with their customers in a very-very strong way. We participate in various forums. We are also part of World Economic Forum manufacturing task force and so on and so forth.

Manufacturing has been defined by many people in many-many ways. I want to just take a minute to tell you about manufacturing, the way we define it. We have hi-tech automotive, aerospace, industrial manufacturing and resources. Hi Tech - this is probably one of the strongest across both Indian and Global players, a kind of the footprint that we have from consumer electronics, ISV, semiconductors, Telco OEMs as well as distributors who distribute these electronics and telecom products. Automotive - we work with the auto OEMs, we work with the financial services arms for them, we work with their suppliers, the tier-1s and tier-2s as well as the dealers that go and sell these vehicles to them. Aero - both large aero OEMs, smaller aero OEMs as well as tier-1 and tier-2 suppliers to them; Resources - agri business, chemicals, metals and mines and industrial

manufacturing companies as well. There are some of the names that are there, these are all in public domain.

Now I just want to pause here and give you a view on how the market is and what are we seeing in the marketplace with regards to each of these five segments. Hi-tech and automotive are the two strong B2C sub-segments in my business. This is where the end consumer, that is you and I actually buy the products from these companies. The aircrafts are not sold on a shelf, you don't go to a retailer and buy an aircraft. You go and buy a car, you go and buy an Apple, you go and buy a Microsoft product and so on and so forth. In both of these cases there is a lot of new product incubation that is happening, there is a lot of demand for innovation, you never thought the second version of iPad will come within the first year of launch, so there is a lot of activity that is going on there. There is a good amount of pipeline and great adoption of newer technologies, both Renew and New. It's a tremendous opportunity for all the service providers.

The two sectors that are actually challenged and are a little soft are aerospace and mining sector. Aerospace, simply because the two large programs for aircraft manufactures have come to an end and now they have 10 year plus of order backlog. Now their entire focus is on manufacturing these products and just giving it out to the airlines. All the focus is on profitability and driving margins up because they have already invested heavily and now they want to reap the benefits of that. Mining sector overall, you guys know that mining overall is down so that is an impact that we are seeing in our customer base as well. Related to that all the industrial manufacturers who serve the mining industry, the people who have equipment in the mines, there is a softening over there on the in terms of the spend.

Let me give you a color on the large deal pipeline. In Manufacturing, we have spoken to all the deal advisors, all the third party advisors that play in this field. There is a softening of large deal pipeline overall in the manufacturing area. Typically in hi-tech you barely see large deal pipeline anyway, but in the automotive, industrial aerospace as well as resources side the large deal pipeline is a little soft. Whatever is there is more in Europe than in the US.

Last but not the least there are a lot of acquisitions, there are a lot of divestitures. There are changing priorities from the customers specially in hi-tech, people who are focused more on PCs moving on to the tablets. This is where we are seeing a lot of changed priorities for specific customers at specific points of time.

This is a brief color that I wanted to give you on the five segments that we cater to. This is some more data. LTM revenues are around \$2 bn, LTM revenue is around 23% of the company. We have a very good mix of US, Europe, Rest of the world. US contributes to a large portion because we have a very strong hi-tech. Europe barely has any hi-tech footprint in terms of the customer companies and if you look at the right most pie chart, you will see the consulting and system integration, typically manufacturing companies are very strong on ERP-led transformations. You would see a very strong, one of the largest footprint of consulting and system integration. Engineering is very core. Vishal has talked a lot. Sandeep has just shown me a five minute ticker so I will have to move a little quicker.

Some recent news – we announced \$125 mn TCV win with a hi-tech major. The second one is very important because Europe itself is tough and France is even tougher and opening a new account with a good French auto OEM was very-very important. We went to steady state in July and we had a press release which says that we are doing all the infrastructure data center etc operations for Daimler. Vishal already talked about big data and IIP platform, doing transformation for Diebold, this is my friend Andy Mattes – CEO. If you will read the quote, the kind of transformation that we have been able to do and help them in how do you do predictive monitoring of the ATMs is quite remarkable.

Last but not the least, I encourage all of you to go and see the car outside. It is truly remarkable. It is the driver-assisted research vehicle that we have co-created with Toyota. It helps cut down the number of accidents that happen in the month.

Vishal talked in great detail about the duality of opportunities that exist for us and for our customers. I am just quickly going to run through a couple of examples. The first one is a European agri business customer where we harmonize their processes across 90 countries. It is truly remarkable. It was a failed rollout for the last five years prior to when we took it. It has been extremely successful. The latest challenge that the customer threw at was how do you increase the forecasting and thus attain higher margins for the customer because of the constraining resources that this business is. What we have been able to do with the best of technology is to forecast sales and ops planning of 1.2 million units within a week. We have been able to improve the forecasting of the goods by 20% and thereby saving 5% on the margin for them. So you can see the impact that we were able to make with this process. The second one is the global networking major where we have done all kinds of things with their supply chain, auto management, services and salesforce optimization. The latest thing that we did was connected supply chain. What is really important here is they used to take one week to figure out whether a product is actually delayed and 29% of the time the products used to be delayed. Using the sensory technology, collaboration a whole bunch of things, we were able to save them a ton of money. Just imagine the product going first time at the right place, it is a big thing, and even 29% of your products are actually delayed.

Talking a little bit of New, now this is the first one which we have created a digital aviation platform for our customer. This is truly remarkable because now in place of selling just an aircraft, the customer is able to sell the entire service. This is for fleet management, this is for maintenance, this is for training, this is for weather information and a whole gamut of things. The most important thing is this has all created a \$5 mn performance year kind of a saving for our customer. A very important point is this is not only their aircraft, this is a mix fleet, so other OEMs as well. So they are able to eat into other competitors business as well.

The second one that I talked about, DARV, you should see the car outside. It is truly remarkable. They say 80% of accidents happen because of driver distraction in the last 3 seconds and this is what we have been able to capture and we are helping. Every time you rent a car in the US or outside India and hopefully it will come in India soon, you will see some of this new technology coming into the cars every time.

Moving on very quickly – why have we done well? This is my view. We have done well because we have a strong and a very good track record of delivering on large transformation programs very-very successfully. Success begets success and this is what has helped us. We have ability to go across IT, engineering, business side, as well as operations very-very strongly. We are the largest for engineering as expected. We are the largest for BPO, not probably as expected but we are able to do a lot of things together. We have invested very heavily, wherever there is new technology whether it is engineering, whether it is IIP, we are the first ones to adopt that, accept that and move on. Hopefully I can do more with platforms with Sanjay Purohit but hopefully we will change things rather rapidly.

And last but not the least – what are we focusing on? There are many things we are doing. But these are the ones that we believe will drive the growth for us. ERP driven transformation - ERP will continue to be very strong so that transformation and helping customers get into newer areas, get to the changing supply chains, get to manufacturing facilities, the customer base is changing, use the sensory artificial intelligence and help them change their order to cash program, etc., that is very-very important. Since manufacturing comes customers spend a lot less on their IT in terms of their revenue, infrastructure transformation and helping them go on cloud, can significantly save them dollars that they can use to do many-many more things. So that continues to be a very

strong thing. Digital transformation - even in B2B customers like aerospace they are spending a ton of money because they want to influence you and I to fly on A380 or a Dreamliner. So there is a tremendous amount of investment that these companies take out in these areas; data and analytic - manufacturing will lead the way because the sensors will first go into machines in the product and that will feed the data, so we have to be ready to do that. Internet of Things and connected devices, I have already talked about.

So thank you very much, I am happy to take a few questions. Sandeep, if you allow.

Yogesh

I am Yogesh from HSBC. Just a couple of question, Sanjay. Number one, you mentioned resources and aero are slow right now but your penetration is reasonably low as well, 6 of 20 resource companies, so how difficult is customer acquisition in these markets?

Sanjay Jalona

I did not say about entire resources, I just talked about mining industry. So mining industry is soft. There are large sectors who deal with mining industry. We have are very targeted base. A lot of them are our customers and we have enough opportunities there. In the other sector we don't see any problem and we are continuing to open and have plans to grow that business. In aerospace, I think we have a very good footprint, it is just that the customer spend in the next few years we are not expecting them to spend new programs. That is why we believe it will have challenges, it will not because of the footprint us not being there, it is just that their spend is not going to be too much, because their focus will be on manufacturing what they have already built.

Yogesh

And then just a quick one on autos, globally if you see most of the larger companies are growing mostly in China, so how does it impact your business considering there is not much which will come out of China at least as of now. So does it impact the business from let's say Daimler or BMW?

Sanjay Jalona

It actually does not. So if you really look at it, automotive companies, we work with 12 largest auto companies and they are very global in nature. I will give you an example. There was a question on what we are doing on engineering. So what you need in Germany in a car is not probably what you need in India or in China. We have an offering called value engineering where we strip down, we buy all the competitors' car seats for example, we strip them down. If you are an engineer as I am you want to put the best product to make a car seat but you really don't need it for all the market. So how do you strip it down. Those are the kinds of opportunities that come your way. When a customer goes into newer geography or goes and attaches into an adjacent segment. So it is an opportunity for us to be in China with our global customers.

Vju George

Hi this is Viju from JP Morgan. Sanjay, one of the trends that we thought were happening couple of years back was a big shift of manufacturing from China back to the US. Has that happened and if so, there are a lot of IT opportunities evolving from that that somebody like Infosys can tap into because we haven't heard anything much from the IT services side on that.

Sanjay Jalona

A very good question Viju. Yes, there is a lot of movement that has happened because of productivity, the automation that is available, good electricity, packing that is bringing it down, the kind of opportunities that are available. Yes, there is a lot of manufacturing, a lot of customers of ours have set up manufacturing facilities over there. But this is a cycle. Manufacturing typically shifts from one geography to another and so on and so forth. Customer bases also shift from one place to another. There are some opportunities that come by especially in manufacturing execution systems, managing the shop floors. So those are the opportunities that come by when some activity like this happens, but it happens all the time. There is a manufacturing moving right now to US and it will continue to do so in the short period of time.

Ankit Pande

Hi, this is Ankit Pande from Quant Capital. I just wanted to ask some more depth or in-depth comments can you give us about the mining industry in particular. So currently the commodity prices are really low and that's impacting their spend in all areas. But suppose this were turnaround, where do you think that they might spend on and how the various service lines may shape up for you? Would there be larger engagements, would they be more ERP-led or would it sort of new initiative. How do you think that may pan out?

Sanjay Jalona

So you are talking about mining industry?

Ankit Pande, Quant Capital

Yes.

Sanjay Jalona

Okay. So look, even if there are challenges, the good thing is there is an opportunity for us because we can cut the cost significantly down for a customer. There are opportunities in supply chain. The example that Vishal talked about for a mining customer, how do you stop a mine from going totally dysfunctional? There is big data analytics, there are sensor solutions that you take to them. There are cost saving opportunities where most of their spend actually goes to. If you can create solutions which actually help the customers save cost, those are the opportunities that are there. A growing company on the top line, a company which is constrained for resources, how do you save cost. So all the cost saving initiatives whether it is in supply chain, whether it is in field force productivity, whether it is in their order to cash programs, whether it is in their forecasting – sales and ops planning to actually help them, those are the areas that become very-very important.

Ankit Pande

But suppose if the situation were to turnaround and the commodity sort of industry just reverses at some point. Do you think there will be large engagements for the IT outsources, how it will pan out? What do you think?

Sanjay Jalona

All sectors are very right, there is no sector which is totally dead. There will be opportunities, there are current opportunities, large opportunities even in the mining industry. It is not as if they are absolutely dead and buried. There are opportunities which are already existing in a lot of sectors and a lot of these companies in the mining sector and there will be more opportunity. They will start to spend on the revenue side of things and those opportunities will come by. Expansion globally, going into newer markets, creating new mines, N number of things will come.
