



“Investor Meet 2017”

August 11, 2017

Participants:

Mr. Madhukar Dev – MD & CEO

Mr. Nitin Pai – SVP, Marketing

Mr. G. Vaidyanathan – Chief Investors Relation Officer



Q1 FY18 Investors' Meet
11th August, 2017, 3:30 PM IST

Moderator: Good afternoon. I, on behalf of Tata Elxsi, welcome you all to the Investors Meet. Our agenda goes like this. We have the opening remarks, introducing Tata Elxsi. Then we'll have a Q&A, followed by refreshments. Let me introduce the Executives from Tata Elxsi. We have Mr. Madhukar Dev, Managing Director and CEO and Mr. Nitin Pai, Senior Vice President Marketing. Handing over to Mr. Madhukar Dev for the opening remarks

Mr. Dev: Good afternoon and welcome once again. Tata Elxsi is a company that's a bit hard to describe. For one, we are not static; businesses keep changing. For another, the skills that we deploy for our customers range from absolute creativity to deep technical knowledge. Given this complex mix, what we've been doing over the past few years is to hold this interaction in our campus in Bangalore. The idea is to give you a level of familiarity with our capability with the markers that we address, the trends that we see in the market, that goes much beyond the quarterly numbers that we publish. This time while we had originally planned this interaction to be in Bangalore, we got suggestions from a number of you that we should try and hold one here in Bombay. So, what we will try to do over the next hour or so, is to show you elements of what we would have shown you in Bangalore. We, obviously, cannot do any of the demos that we would have done there, but again the idea is to give you a level of familiarity with the company, the spirit of the company, the work that we do, the trends that we see in the marketplace, just so that you know who we are. It's very hard for us to describe our business fully without showing you. So, I thank you once again. I must apologize for a bit of confusion with some of you who thought they had to register and were not able to register, but happily I think we've been able to accommodate everybody. So, we will get started with Nitin describing the company to you using an audio-visual presentation. Thank you.

Mr. Pai: Good afternoon. My name is Nitin Pai and I'm going to take the next 40 minutes. Hopefully, I will not speak for those 40 minutes. I will let some of the slides and videos do some of the talking. So, very quickly, if you look at Tata Elxsi, you would know us for two things. You would know that we have two parts of a DNA, one which is technology led with about 5000-plus engineers working across domains. That is complemented by our award-winning design team. That's a team of more than 500 designers and engineers that complement what we do on the technology side, bringing in aspects of consumer insights, strategy, design and more. So, this continues to be our core DNA, and that really lends to the tagline 'Engineering Creativity.' That is what we really are about.

But where do we see ourselves going and what we've been doing in the last four-five years now is really taking this core and building around it, key capabilities around digital. And what does digital mean for us? It would be an internet of things. It

would be robotics. It would be AI. It would be mobility, social and more. It would be VR, AR and related augmented technologies. It would be aspects of the cloud.

Now, we don't profess to be an IBM Watson. We are not Microsoft Azure. So, let's be clear. We are very focused on how we can take these digital technologies and build them into the verticals that we're working in. So, therefore, we would be focused on looking at what AI means for cars, what robotics means for appliances, what something like cloud computing would mean for operators. So, we are looking very clearly at the spaces that we are in, and we are looking at how digital impacts those companies, their brands, their products, their services, and we're looking at how we build those capabilities in for ourselves first and then be able to deliver it to customers. So, that is a journey that we have been on for the last four-five years now in each of these technology domains.

The second piece is being able to invest in solutions. Of course, Tata Elxsi is a services company, so to that extent a large part of what we do is bespoke services. That is, we talk to customers. We strategize with them. They tell us this is the scope that we would like you to work on and therefore we would work to that scope, we would have a clear exit criteria and we deliver. And at the end of the delivery, we don't retain any IP rights because it's all deemed work-for-hire. So in the classical services model everything that we've done belongs now to the customer in terms of IPR. So, that's a perfectly valid model. That's the way a large part of the IT industry works too. So, we have been doing exactly that too. But over a period of time we also do realize that there is a need to invest in certain solutions. Those solutions drive revenues that are a little non-linear. They also drive a level of engagement and stickiness that goes beyond the classical services capability. So, to that extent, we've also again not been indiscriminate in where do we want to build solutions. We've been very clear that if there are a certain set of verticals that we work for, we would like to first focus on solutions that deliver value to consumers and customers in those verticals.

So, therefore, if you took automotive we are seized with looking at what is it that we can help our customers with in connected cars, what can we do with driverless cars, what can we do for operators where they are trying to accelerate the speed of their deployment with automation of testing. So these would be typically problem statements that would come from customers and we would try to see how we can develop solutions that are then pre-packaged, become IPR of Tata Elxsi and are then leveraged in our engagements. So, that is a large piece that we've been again working on and as you know this is something that we've been doing for the last 15 years. It's not something that we've been doing over the last one year, two years, but like Madhukar said "What we do changes over a period of time," and therefore the kind of solutions that we need to build and what customers want, changes too.

The third piece, of course, is the ecosystem and that's absolutely critical because as you would understand, irrespective of how big the company is, you'd be still dependent on an ecosystem that works with you. Just as an illustration, an Apple has an Apple Developer Connection or ADC simply because Apple cannot do

everything itself, so it is still looking at value-adds coming from a set of companies that work alongside it, trying to figure out what they can do better with its product, with its technology and so on. So, that ecosystem is critical and therefore, we have carefully looked at the space we are in and in the context of the industries that we operate in. We have looked at what ecosystem makes sense for us, what standard bodies we need to be part of, what consortiums we need to be aligned with, what kind of companies do we need to work with. Should it be Google, Amazon, Apple? All three, none of the above or some of the above? So these are questions that seize us every day and we try and answer them as best as we can. We try and build that ecosystem as well as we can, so that covers start-ups, that covers R&D institutes, that covers educational institutes and, of course, that includes technology partners right from silicon vendors to independent software vendors.

So, with these three, we believe we are in a very unique place and that is really what differentiates us and that is what we believe a lot of IT companies are also trying to follow now - the ability to blend design with technology and then be able to address what companies need in terms of products and services. If I were to capture the essence in a single line, I would say we really help enterprises re-imagine their products and services. And please note, it's no longer just a product game, you will find that almost every company including leading product companies, is now transitioning into a service model, where they are looking at the product not being a product that is sold one time, but becoming a mechanism of staying connected with the consumer and deriving revenues over a period of time. So, to that extent helping customers re-imagine their products and services, right from strategy, consumer research, through design whether it is product design, experience design, service design, onto associated technology implementation. And we also have seen our journey with customers go beyond the product development lifecycle alone, extending into their own product launches and beyond.

So, classically, as a technology company what we would do - we would be associated with product engineering that typically happens in new product development. Then the product goes to market and post its launch in the market, we typically get associated in terms of sustenance and maintenance of that product, because there is continued engineering and there are design changes that are made through that lifecycle. But increasingly with new technologies like digital marketing, AR, and VR, we're even associated with helping companies launch these new brands and products. And we believe, therefore, that this is what encompasses our uniqueness - the ability to think on behalf of our customer's customer; that is the end consumer and therefore be able to help them deliver that great experience to that end-consumer, automatically leading to great outcomes for the brands and the businesses itself. So, that is really our focus. On financial performance, I think we've done rather well. So, if I look at the last three years, we've grown at about 17%. We've done a little better than that on the bottom-line, where we have grown at about 32% over the last three years. In terms of dividend and returns to shareholders, that has growing equally in line too. Of course, added to it the bonus share issue that we announced and I hope goes through this year.

So, now let me dive a little deep into each of the verticals that we work with and like I promised you at the beginning, I'm not going to do all of the talking. So, I have a small video for you.

That short video encapsulates what we do in automotive design and technology. You will find that we have a broad coverage of domains within because when you take an automotive vehicle, you can then break it down in many, many ways. You can break it down simply as mechanical versus electrical and electromechanical. You can break it down at domains. So you can look at infotainment, you can look at chassis electronics, body electronics, powertrain and so on. So we are associated with key areas, both from a current trend perspective. In Infotainment where the cockpit of the car is evolving, you now have clusters that are digital, you have heads up displays, you have instrument panels which are touch screen, you have voice and gesture control. So that is the direction that we see infotainment going in, and are well placed in terms of the kind of work that we're doing there. Active safety is the direction that cars are taking in terms of offering safety proactively to consumers. So, really the end goal of active safety would really be driverless cars in some sense. But right now, you'd see it as rear view cameras first, you would see a surround view, adaptive cruise control, so on and so forth. You will see it being offered feature by feature, but ultimately the end goal or the end game is really driverless cars. You would see us in electric and hybrid technologies where we're working with customers for software aspects of what it takes to transition current gasoline to hybrid or electric, and equally working with customers in terms of sophisticated software that will do battery management systems, supervisory control and so on. The same is for body electronics. You will see increasingly sophisticated electronics coming in to provide that extra level of convenience and comfort inside the car. And of course connected cars, because a lot of this whether it's infotainment, whether it's navigation, whether it's driverless cars, or advanced safety, all of this has to be enabled by connectivity between the car and the rest of the world. So we are working on connected cars too. We are always limited by the examples that we can take. So I'm just going to share examples that are allowed to be made public by our customers. So to that extent, you will find that we are associated with leading OEMs including BMW, Daimler, and Jaguar Land Rover. We work with OEMs across the world, including some right home here in India.

The other part really from a design perspective, is the trend that we see towards how cars interact with humans as you progress. And interestingly, this was a problem statement given to us by leading luxury car maker. They said - help us think through what the human machine interface would be in the year 2025. You will note that in most advanced markets, cars will start to become autonomous by 2025. So by 2025, you will see a world where there are cars which are just like today's cars. Equally, we're going to see cars, which level two or level three or even level four autonomy, which means that for certain parts of the journey they're driving themselves, certain parts of the journey the driver is taking control. And you are going to see fully autonomous cars where cars are driving the entire journey themselves. Imagine the complexity of that world. It is actually quite fine when every vehicle is autonomous; it is completely different when you have completely

different levels of autonomy co-existing on the road. Also think of the mindset of people. Would you trust a car that is driving itself? Would you be confident enough to go and sit in the back seat of a car that is driving itself? So you also have this issue of people trusting a self-driving car. When you have a chauffeur, you can look at the chauffeur and tell whether he is sleeping, you can decide if he's being distracted and so on. With a car, you can't tell. You do not know if it's awake and that's one aspect of this future. Part two of the future is that just like Facebook now knows you and therefore gives you all those ads that are targeted at exactly what you were searching for outside of Facebook. The world is more and more digital. So the car is going to know you and if it does know you, it can start to personalize for you. The third is the world is going to get more connected. You already have smarter homes. Your office is connected too. So now that you're in the car and the car is connected, what would that seamlessness be? This video gives you a sense of those futures.

So what you'll see is very high-end strategic thinking on design, but if you look at what will make that happen, it is technology. Because if you understand, there's going to be a whole lot of artificial intelligence coupled with what is the front-facing design that is going to enable that kind of an HMI. It is going to take connectivity of the highest order that seamlessly ties in your schedule, your e-mails, your calendar to what the car is doing as a journey. But that integration will require a whole lot of technology that has to sit underneath, but the user doesn't see that technology, he just sees the benefits of the technology, and that is where we keep hopping back to this blend of design plus technology, that's critical. I'm just going to move on very quickly now and like I said, we go beyond now just product development. So if you look at again public examples, we've built this wonderful virtual / mixed / augmented reality experience for Tata Motors. This was at the Geneva Motor Show where Tata Motors was participating and aiming to raise its international profile. As you know the sports car that Tata Motors unveiled as well as all the other models that they had there, including Tigor, Nexon, Hexa and so on, so you had a VR experience that allowed users to experience the cars without being in one. You had mixed reality, almost like Iron Man where you can see both the outside world, as well as a virtual world together and that would allow you to take a look at the show car, and see what goes inside the car even as you are looking at the exteriors. It was rated among the best in the show. Believe me, Geneva Motor Show is absolutely up there amongst premiere auto events in the world. So you are competing with the largest OEMs there are, and to create such an experience I believe is a wonderful thing for Tata Motors; a wonderful thing for us too. And why is it wonderful, because as I think about VR, AR and MR, it's not just technology. Yes- there is a whole lot of display technology and integration that is associated. There's a whole lot of content. So our visualization teams - as you know, we have this team that has been working earlier on movies and so on - so that entire team built the content that you need to represent absolutely realistic cars, virtual environments and so on. And then the design team came in to work out how users will experience the entire journey. So for us, it's a wonderful example of technology, design and visualization.

We see more work coming this way, especially as companies try and transform the retail experience. This was at a trade show, but remember that soon you're going to see such technologies impact retail itself in terms of how companies, brands and businesses communicate their products to consumers. How do I sell, how do I explain benefits, how do I use technology cleverly and explain that without having to rip apart a car? So you are going to see this in the retail experience too.

We of course have to invest in solutions, I'm just going to pick one up. As you are all aware, we have spent the last two and a half years investing in our own driverless car software, it's called Autonomai and the color coding for the AI part of the name is specifically intended that way, because there is artificial intelligence running inside these algorithms. So this is another software IP that is based on AI and machine learning, which means that it continues to learn, the more you drive it. So the algorithms are built to continuously learn and therefore every time you drive the car whether during R&D, during testing or on the real roads, they continue to learn and improve just like real drivers do. We continue to work on that and we're happy to announce the licensing of Autonomai by a top five global OEM. So we're not talking of India but one of the top five OEMs in the world who will license Autonomai from us and we are working with them to be able to implement their driverless car R&D road map. So we hope to find more customers like that as we go further.

Going forward, of course we continue to invest in the ecosystem. So whether it's a Qualcomm or Renesas or Intel in the silicon space. Equally we work with leading software companies so whether it's Irdeto for security in the car, whether it's DiSTI for 3D graphics, whether it is Green Hills for hypervisors and operating system. So we have a whole set of partners that we're deeply embedded with and of course consortiums too. So whether it's the R-CAR consortium, whether it's AUTOSAR, we're integral parts of these ecosystems.

So very quickly if I look at broadcast and communications which is the second biggest vertical, again I have a short video for you.

I'm sorry we can't stay away from acronyms in our industry. So you would still find words like SDN, NFV and so on in my slides. They are essential parts of where the entire communications and operator industry is going. Equally you will find wonderful examples of where design and technologies come together even at home. So you will find Airtel's latest Internet TV launch. It now doesn't require you to own a Smart TV. You have a hybrid setup box with one part of it running Android, the other part being the conventional setup box. With Android you can now use a voice remote, you can browse the OTT world, you can subscribe to Netflix, Amazon Prime and so on, right. So really for Airtel and for customers of Airtel, it's bringing the two worlds together - the classical satellite world with the usual collection of channels and the entire world of OTT, which is where you're accessing content over internet. So this is where we were a partner of Airtel. We were a technology and design partner. We worked with them on the user experience too. So you'll find a wonderful experience in terms of how you browse and work with the electronic program guide. Equally the technology implementation behind that, leveraged our

partnership with Google for Android TV. So we are one of their only partners across the world from a services side. So getting over all those technology problems and enabling the operator to go ahead and launch a service, and we believe that this has been exceedingly well received. We are happy to have done our part in enabling this success. Equally everywhere that we go, we do work on the digital side. So if you look at SDN, again that is Software Defined Networking. And what does that mean? Let me just simplify it for you - if you think about it, currently all technology from service providers is completely dependent on what they put inside the network. So therefore for example, if you had a router in your home and it was capable of 128 kbps speed at the maximum, even if the operator increases the overall bandwidth, your router has to be switched in order for it to do something more. If you think about what SDN is going to do, it's going to allow the box in the home to be virtualized and therefore stops being a bottleneck for the type and scale of service being delivered. Now I as the operator can decide if it is this bandwidth, or an additional firewall service is extended, etc. So what this allows you to do is to configure services like that on demand. It does not require tech support. It does not installation. It makes the entire roll out of new services easier, on demand, flexible, scalable. This is really the flexibility that customers are looking at. So this was a solution that we built for Avaya, intended for the healthcare industry. Very interesting and why? Because hospitals especially overseas, you will find a whole lot of networking that's happening inside, all your medical data that's captured is digital now, right. But because of the kind of privacy laws that you have in western countries you require the data to be absolutely secure and equally the machines can move. It is not necessary that x-ray should happen only in the x-ray room. If I'm a critical patient, the x-ray machine will travel to me, the MRI will travel to me, the ECG will travel to me. So what happens then, because you now suddenly switched network point? So hospitals are a huge data store, requiring privacy, security and yet flexibility of the network configuration, access control and network rules. So the kind of solution that we've built allows you to move people, equipment, and data around a hospital, with assured security that's completely based on software defined networking. Sometimes it's difficult to understand what digital means. This is really digital because I'm bringing the technology on top that then takes care of legacy networks and suddenly says I can transform whatever legacy network there is.

Equally we continued to invest in solutions and please note for lack of time, I'm going to cover every solution that we have either in automotive or in broadcast and communications, but what we see doing exceedingly well for us is what we call FalconEye. It's a test automation solution that we've now been successfully licensed to over six operators. We hope to find more and this is a test automation solution that helps them automate their testing - typical cycles of development that would have been six months out of which four months of development, and two months of testing is now cut short to days. They can now develop and launch services faster. So, therefore you will start to see words like Agile and DevOps and so on in development. Where are these concepts coming from, they're coming from companies like Facebook and Google where your mobile app software updates itself once in two weeks or so. Why are they doing that? Because they're planning to

release cycles where I say these two features will go in the next two weeks. So I don't wait for the classical waterfall model of product releases once in a year, to get a new product. I launch small, small features but I make that change every two, three weeks. Operators need to do that too. So if you look at operators like Tata Sky and Airtel now, you may not notice, but there are new services, new changes in the UX that are being sent to you once in 2 / 3 / 4 months. The challenge is how do you get to be as fast as Google and Facebook, how do you make it every month, how do you make it once in three weeks, right. So that's where the direction is and that is where testing and automation of testing we believe is a critical element of solving the entire product development life-cycle piece, and we're doing very, very well because we've worked for 25 years with video, we've worked 25 years with set-top boxes and gateways. We precisely understand what needs to be done. We have a rich ecosystem here too, ranging from Google and Android TV to everybody else. So I'm not going to spend too much time on that.

Healthcare - as you're aware, this is a relatively new business and I'm saying relatively given the amount of time, duration and learnings that we've had in the other verticals. So healthcare is a little recent. We continue to invest in this business. We have already won some key customers and these are big customers. We are hoping that we will scale as we go along with them, but equally we do understand where the healthcare industry comes from because this is similar to where the automotive industry was coming from, 20 years back. These are highly mission critical industries - they demand reliability, safety and compliance to regulations that go beyond the usual. It doesn't matter if your phone stops working, but it does matter if your car stopped working on the road. It does matter if the medical device that you're using had an error, right, because these are life-and-death. So they are typically a little hesitant, a little more conservative in how they engage in terms of outsourcing. So we see the same signs as we see as automotive. So we're hoping that between ourselves where we continue to invest and how we see the industry shaping up, we will scale. So at this time that is where we are, but we have good things to show you. So, if you look at the kind of work that you're doing, we're working on interesting innovations. So this sternum saw for heart surgery was jointly developed along with Narayana Hrudayalaya. And the idea was how can you speed up the entire process of heart surgeries. The goal was how do we bring in precision, calibration and so on into the way this particular operation is done.

Equally we have worked with companies that work on diagnostics, whether it's blood, whether it's other parameters. Equally we're working with companies in patient care itself. So whether it is infusion pumps to regulate and monitor drug delivery or otherwise, we continue to engage with global leaders in complete product development. Equally if I were to extend it into the digital side, here is another interesting example of a company that we worked with where we're looking at telecare and telehealth. This is an interesting space because what is happening globally is that care is moving out of hospitals to the home itself. Part of it, you would know as some of the new policies in the US in terms of healthcare where the aim is to prevent relapses of patients. Because what happens more often than not is

people suffer from some problem, they go to hospital, get admitted, there is a surgery, there is an intervention, they're fine till then and they're then discharged and they come home, they don't follow guidelines, they don't take medicines regularly, they don't stick to their approved plan and so and then they relapse. And when the relapse happens, the expenses that hospitals and of course the US government in terms of healthcare services incurs is very high. So there has been a strong movement to say what you can do to prevent such lapses, to manage the care at home too. Equally I think as the world gets older and that's a phenomenon that's happening globally, you will find more and more old people, not wanting to go and stay in an old age home. They may or may not have a medical condition or one of the couple may have a medical condition, but they still want to live independently and live right at home. So what kind of solutions can you bring in to provide for that telecare and telehealth is what we've been working on. So this particular solution brings in over 40 sensors into the home - it monitors everything right from bedwetting to hypothermia to whether you're moving, to whether you're not moving, to a pendant that you always wear that you can use to call for help. It monitors your gas stove, bath tub for water overflow. It has CO2 sensors. It also has door sensors and there's a whole lot of AI that goes behind because the idea is if there's a person who's suffering from dementia or otherwise, and you know that is a condition that that person is suffering from and the door opens and you find that the person is now gone out of range for more than X minutes, it would actually raise an alarm immediately. The system raises an alarm, it contacts neighbors, it calls the ambulance and the fire service. So that is the kind of service that is getting deployed in terms of telehealth.

Equally we work with ecosystem. As you are aware, the medical industry is full of regulatory bodies so whether it's the FDA in the US, whether it's CE in Europe or equally other standards covering Brazil, Japan, and so on. Every medical device we've built has to conform to certain standards depending on the criticality of the device. So not only do your engineers need to be aware of regulatory compliance, your documentation needs to be appropriate, your processes need to be in line and equally you need to provide a whole set of system engineering and reporting that confirms to customers that you have followed the necessary processes that allows them to file for these particular approvals and that's a great skill that we've built, built carefully and built over time. And we're hoping that between the technology capabilities that we've brought in from our work in consumer electronics, automotive, and other areas, the strong design background that we have, the regulatory and compliance related capabilities that we've built, we should make our mark in this space too. So we're engaged with a few customers to start with, and hoping that that list continues to grow.

Very quickly, I'm just going onto the other part of the business, so design is of course woven into everything that we do in automotive, broadcast, communication, healthcare, but equally design finds its place outside of these areas too. So therefore you will find Tata Elxsi's design work everywhere. In fact, I would not be wrong if I were to say that if you were to go to a supermarket shelf today and you were to look at the personal food section or the personal care section, that is

shampoos, soaps, conditioners and so on, many of the products are you see there would have been designed by us. So whether it's P&G, whether it's HLL, whether it's L'Oreal, whether it is Emami, we have a global roster of customers in the FMCG space. So we've worked with all these FMGC companies to help design the way the packaging looks, the branding and so on, so forth, and the way it dispenses and so on. So that's one aspect of what we do and what you would see directly publicly in the supermarket shelf, but equally our work extends to service design, user experience, visualization and beyond.

So again some interesting examples which you would not know, so we work with Tata Automation Ltd that has built this Make in India robot. It is a pick-and-place robot, comes at a cost that is far less what it would cost you to buy a comparable robot anywhere else. So we've worked on the design of that robot for them. It's a wonderful piece of work working with fellow Tata Company. Equally you would find other products and I've just picked up what we did in the last three months - ProteinX and their entire new product launch. As you're aware, Blue Star has launched a whole range of water and air purifiers, again we have been partnering with Blue Star, with Mother Dairy, with Anchor and so on and so forth. So a whole set of work on the packaging side, and some wonderful work that we're doing on service and experience design. So as you're aware the experience design at T2 has won multiple awards. It's a wonderful experience inside T2 where we have designed the entire passenger experience - which is how do you design that space for people to move, how do you make sure that you're putting services in the right place, how do you make sure there are appropriate customer touch points. For example, you'll find an emerging need of passengers in airports are charging points and that's the one thing that are lacking in Bangalore - we don't have enough charging points around. You will not find that problem in T2, right. These are small things that you would not realize, but you would experience when you visit one airport versus the other. This is what we call customer experience. So while the space looks beautiful, it's well laid out, it allows people to move and do the things they want, so if you're a business traveler you want to go to your gate from security as fast as possible; if you've come in early, you've come with a family you would like a little bit of shopping, eating. It allows you to break crowds up, spread them out, without overcrowding, and allows people to enjoy that experience, and yet make sure that the experience is always right for every kind of user inside. So that is one type of experience design. Equally we have done wayfinding and information signage and as you're aware, India has a terrible record for signage design, including road signs, which vary from city to city. So we've been doing a lot of work in way finding and signage design, so whether it is the Bangalore International Airport, Mumbai Monorail, and so on. We bring a whole lot of science into way finding and signage design, bringing in consistency irrespective of whether people can read English, read Kannada, read Hindi, etc. So irrespective of literate or not literate, how do you make sure people can understand signs. So there's a whole science to that that is then brought on top by design, right. So here is a small video for you on the work for Kochi Metro.

So Kochi Metro is truly a wonderful experience for us too. Why? Because we worked on Kochi Metro right from the brand and brand logo, down to the passenger experience inside the train, outside the train, in the station, the mobility app, the HMI that you use at the kiosk. Equally the branding of the tickets, but most importantly the integrated transportation system because we worked with them to design the experience right up to the last mile. So how you would integrate rickshaws, taxis, buses and water taxis because Kochi allows that, how do you build a system that provides for the last mile whether you're reaching the metro station or getting off and reaching your last point. So your card just like your Suichi card in Japan or your pass in Singapore or the Oyster card in UK allows you to use that same card across services. It allows you to integrate that entire experience. So we believe that Kochi Metro has been a very defining moment for how metros can be built in India, built with design in mind, built with passengers in mind and we are quite happy to see that the Airports Authority of India has also commissioned 10 airports under its care for way finding and signage now by us. So we've just started on that exercise, which covers 10 major airports that are under AAI care, and what we're also doing is that we're setting the standard now and setting the guidelines for any airport that'll be built in India in the future. So there is science there, there's technology there and there will be design there.

Lastly, we are also starting to look at how we can build great experiences for customers meant for their own stakeholders - whether it is investors, whether it is their shareholders, whether it is the customers, employees. All companies have this need to be able to better explain what they do, how they make an impact and therefore, we've been looking at and working with a full set of customers across sectors - financial services, corporates with multiple companies under their fold, where they have this difficulty in explaining what does my company do or what do all my companies do, how do we contribute to society. So we're building these wonderful experience centers for them. We'd be happy to do it for some of you too, right. So I would like to invite you and that is one of the things that we missed by not having this investor meet in Bangalore - we could have shown a little example of how experience centers can be done with our own experience center. The whole idea is to be able to communicate better.

So, I'll just end with a slide covering recent awards and recognition. You've already seen the iF award that we won. It's one of the most prestigious awards in design across the world. So we were the recipients this year for service design with the Kochi Metro project. We're happy to say that we're doing very well within the Tata group too. As you know, the Tata group relies on two pillars by which it brings the entire Tata group together - one is the Tata code of conduct. It's the book by which defines the way we do business. The second is the Tata Business Excellence Model where every company gets assessed based on nomination. It is an assessment that cuts across strategy, right to financial success and we were recognized as the emerging industry leader this year. That's a wonderful experience for the entire team at Tata Elxsi.

Equally being recognized for our engineering innovation capability by Electronics Maker as well. I'm not sure how many if you checked the news today - we just announced that Jaguar Land Rover announced Tata Elxsi as their strategic supplier for 2017. Now, why this is important is because we've been working with JLR for 16 years now. We are the only services company that has been awarded the strategic supplier award. Typically, the award is reserved for the Tier I suppliers who supply materials, components, parts. It is of course, riding on the back of 16 years of work and the kind of value that we are driving for JLR. It is wonderful to have customers tell you that we are strategic to their design and development too. So with that thank you.

Moderator: So, now the floor will be open for Q&A. Request one question per investor. If the time permits, you can place the remaining questions, if you have any.

Mr. Mittal: Hello sir. My name is Rohit Mittal. I would like to ask is there is a merger on the cards. Is our company going to merge into TCS in the coming years?

Mr. Dev: We know just as much as you do, nothing more than this.

Participant 1: You made an opening remark that we are not static and keep on changing. Can you just little bit elaborate because as an investor we like stability? So, what is that you talk about keeps on churning in your business?

Mr. Dev: Yes. You see, everything that we do is relevant in the point and time and it becomes irrelevant very quickly. The faster the change, the pace of change, the bigger the opportunity for us. So, if you recall some years ago, we had put a lot of our effort behind entertainment and visual effects - animation and visual effects for the entertainment industry. We've morphed that capability into a visualization service which no longer depends only on the entertainment industry. It does marketing communication, it does visualization of products and services that don't exist. So, we are using the same skills with this slight change and have reduced our dependence on the entertainment business. Those of who know Tata Elxsi from 15-16 years ago will know that our system integration business was the main stay of the company and most of our revenue used to come from that, where we used to buy hardware and software from others, put together solutions and supply and commission and maintain it for our Indian customers. We've defocused from that over the years. We do only those projects where there is a substantial value-add from us and we are no longer a major reseller of anybody's hardware or software. So, constantly we are dropping something, adding something.

I know as investors you would like to see predictability and would like to see a guidance where our revenue would be some quarters down to the second decimal place, but our life unfortunately is a lot more uncertain and what is important is that we have people in the company who thrive in this uncertain environment and that's been the key to the company success and so as investors you should feel confident that we have the ability in the company to handle uncertainty, and yes, there will be

times when you will see a blip here or a blip there but overall we have thrived in an uncertain environment.

Participant 1: If I can ask one more question, sir you mentioned what kind of area in future -- presently you are in three particular streams -- three business streams, so what kind of area you can enter or exit?

Mr. Dev: Nitin mentioned an area that we have just got into which has got to do with communication. Communication may not necessarily be just for marketing, it can be any form of communication which requires an element of visualization and the experience and business that we've got into only in the last 12 months, is an example of the way we sort of scout around, sense an opportunity and respond to that.

Participant 2: Good evening Sir. Sir, Autonomai as a platform and automotive technology, it's brought a lot of traction for us in the recent period. Sir, going ahead, in your opinion, which solution or which vertical do you think can be a major growth driver over the next two to five years.

Mr. Dev: See, one reality is that what necessarily gains prominence need not be the major growth driver but it helps profile the organization, helps project capability which results in business which may be somewhat different from what is giving us the prominence. So, Autonomai certainly enhanced our credentials in the area of autonomous driving, but there are some elements of those which may be more important in revenues and rating capability. For example, obstacle recognition in different environments is one component of that. In the developed world, obstacles come in pre-defined shapes and sizes - not so in our part of the world. So, the object recognition system that we have written is something that is effective even in our environment that may result in more revenues than the whole framework itself.

Participant 2: Sir, so going at it, we can see the similar kind of revenue and inclined more towards automotive or any particular vertical you can guide us on that you are focusing more?

Mr. Dev: You see the way we see the future, whether the home, the office, the automobile, the lines that demarcate the boundaries between them are going to get blurred. You will work at home, you will work in the automobile, you will consume entertainment in the automobile and at place of work, and also you will take more frequent breaks which will be more entertainment or infotainment. You've already seen that happening. A lot of people have cricket scores getting updated while they are working and it's not a distraction any longer. When I was young, you would have been thrown out of our office if you were monitoring cricket scores while working. So, it's very difficult to say which market will dominate. It will be a combination of these things and I think we've a reasonable play in all of them.

Participant 2: Sir, just to continue with that example of obstacle recognition software which you have built, just wanted to understand when you build such kind of software, the IPR

resides with you or with the client and how much we can leverage on particular software to earn revenues in future?

Mr. Dev: There are two different approaches that we take. There is in-house commissioned R&D which we do on our own where we make the investment ourselves. Those IPRs belong to us and we license those IPRs and very often the services around those IPRs are higher in value than the IPR itself. When we are commissioned by the customer to do development of a certain solution, the IPR is owned by the customer because he is paying us for the effort. So, we have, you know both models.

Participant 2: So just to understand in terms of scope of work we can do and revenue potential of that work in future. So, it's important for us to understand this angle that how did you foresee ourselves in terms of developing more and more software and are we investing to do software, own the software or we will do some work for the clients and then which like one type of revenue or any kind of model what do you want to bring?

Mr. Dev: Even today we have engagements where we are getting revenues from the IPR that are being licensed, but the service revenue around the IPR may be higher than the IPR revenue. There are also engagements where we do work for customers on customer specifications where the IPR is jointly owned. So, we get royalty on that IPR as it is deployed. The non-linear part of our revenue which is independent of the effort that goes into generating that revenue is still very small. It has only direction to go. It has to increase.

Mr. Advant: Hello. Sir, I'm Rohan Advant from Multi Act. Firstly, thanks Nitin for a very insightful presentation. Sir, I wanted to understand the competitive intensity for your business and context to what's happening in the IT space and growth challenges therein. So, what are the real barriers to entry for the larger companies to enter into our domains; is it that these employees in these company are difficult to impart the skill sets that we do or just that it is project driven work where there is no visibility and so they are not interested today and how do you see this going forward? Thank you.

Mr. Pai: I will just break up the question into two parts. One is in terms of barriers of entry. So, the typical barriers of entry into the usual technology and engineering space I would say is one of competency and I will give you a simple example. If you look at where the word fungibility in the IT industry comes from, the skill set could be imparted to people and therefore they could easily move from one domain to another, one project to another. So, therefore typically it would have been Java, C, C++ or whatever else and therefore the understanding was that if there is an application development that happened in the retail industry and you've worked on Java there, I can move you as easily to banking or securities because we want to work on Java there too. So, that provides the fungibility and therefore that ease of building scale in terms of people, flattening the pyramid and so on so forth, right. Why? Because you had very experienced people do it first but can start to flatten the pyramid quickly in terms of more and more junior people coming in to the point

where you can provide one month or two months of training to a fresher and you can actually deploy them on projects.

The problems of engineering is that the customer will require that the engineer has had to have worked in the automotive domain. That's not enough - then they will say that he has to have experience in chassis electronics and then you should have earlier worked with MATLAB, which are the tools that will be used to generate specification which will then be used in C and so on so forth. So, really speaking, by the time we look at the specifications that are required for people to then get into a project and deliver, you are asking for super specialized people and it is not possible to create fungibility and that kind of domain experience easily. So, I believe that it is the fundamental barrier to entry. In many ways I would also say that that creates less attractiveness because the amount of effort that you need to put in is very high and your ability to replicate that needs to be that high too in order to make sure that those resources are utilized fully, because unlike an ADM project which can be a five-year contract, here your project going to be possibly six months, nine months, 12 months. You will need to be able to find projects that then can successively deploy those resources into the next deal.

So, I believe that this would be typically in my view the fundamental barrier to entry for what it takes to be an engineering company. To the extent, companies that investing in it, well, to that extent it is attractive, because it is seen as a growing market, there is demand for it globally. The talent base is limited globally, so to that extent India does have a nice base of engineers 'so called'. So, therefore it is possible to leverage this base of engineers to be able to address some of that need. So, we will just have to wait and see how it works.

Participant 3: Hello, sir. Thank you for hosting us. My question was regarding the ecosystem, the regulatory aspects - like for example in case of autonomous driving or in case of say health are we are progressing, so how do you see this regulatory aspect emerging and for any particular projects, how much do you expose us to any litigations or event risk which can, you know, really bring a challenge to the company? Thank you.

Mr. Pai: Yes. So, there are two parts to a question in any case. There is one in terms of what constitutes the regulatory compliance and so on and two is what care do we take or how do we protect ourselves. So, the first part of the question is fairly straightforward. If you look at driverless cars itself, the regulations are still evolving. I have met insurance companies in the US. They are actually forming special cells now to sit down and figure out how insurance will be applied in the context of a driverless car. How will it be applied when a driverless car collides with a driver driven car. They have to now start defining the case of damages and liability and so on for their own customers. So, the problem is being addressed step by step. The US government has instituted state by state approvals for driverless car R&D as well as driverless cars on the road. They are still going around it step by step. As you have heard that few weeks back from Mr. Gadkari, he said "driverless car is not a

priority for India". He is right. You would first want to create jobs for drivers and then you would figure out driverless cars.

So, I think we will have to wait for regulations to come. If you look at FDA and the medical space, that is highly regulated globally. India still may lack a little bit in terms of regulations - in fact in that sense India does not have enough regulations. So, typically what we find is that if your product is CE or FDA approved overseas, it is fairly straightforward to get it approved in India. On the liability part in any case, I think the way we structure contracts is that our liability is limited to the part that we play. So, to that extent as a services company, it is understood that I don't own the IPR on the first place. So, to that extent I cannot be owning liability beyond a point. So, to that extent, the structure of contracts ensures a certain level of safety for the company, and we also make sure that we've adequate insurance and so we are covered for any such eventualities. I would say the track record tells you. So, we have been in this business for 25 years and we are doing okay.

Participant 4: Sir, I want to understand what kind of business potential do you have in these segments of business you are operating in right now, say automobile or broadcasting and communication and other.

Mr. Dev: See, we're still a very small company in the context of the opportunity in the world. So, irrespective of what is the market size now, the market size itself is changing constantly. I would say there is enormous headroom for us to grow. The constraint does not come from the size of the market, constraint really comes from this capability and the skills that we have. I don't think we will ever be a one lakh employee company. It's impossible for a company like us to be of that size. So, the market size is way beyond where we live to.

Participant 5: I think it's a very related question I had to answer that you just mentioned is that given the opportunity size and clearly the opportunity size should be expanding given the differentiated work that you are doing. I want to understand how your sales organization is structured because it's not clearly the usual skill sets and projects that you are selling. Right. This might involve concept selling so to speak to address this large opportunity because clearly in an absolute number, we are still a very small company, right, and there is lot of headroom to grow. I agree you may not be a 100,000 people company but I'm sure that you can become a 15,000 or a 25,000 people company doing many more projects than what you are doing today but watching your sales organization structure, how do you get yourself known to your customers? How do you increase your wallet share with those customers, if you could just elaborate on that?

Mr. Pai: Right. So, at this time our sales organization is really a direct sales model. So, in that sense we don't have channels and so on so forth. We have offices across the world. At this time our footprint is directed at where we see customers who build products. So, you have to remember one thing, we do not do anything with manufacturing itself. So, it's not fine if the customer that we work with manufactures in India or has customers in India. What we need is to get to their R&D which is where their

headquarters will be typically. So, to that extent we have great coverage of the US, West Coast, East Coast, UK, Germany, France as well as now Belgium, Amsterdam and so on. We have coverage of Japan from a long time.

If you look at where we have expanded to in the last two, three years, we have started to cover China and Korea because we see that as an original OEM market too, where you would have an enough base of customers. So, direct sales model with coverage primarily where you would find our logical customers headquartered or where they would have based their R&D centers and then expanding it geographically based on where we see emerging OEMs and emerging product companies and so that is one signature. Two is you're right. The sales process is fairly specialized. On one hand we clearly know who we are to talk to within the organization. It is typically the CTO, the VP of engineering, on one hand. Increasingly, it is getting to be the CMO and so on because they control brand and design.

So, to that extent the target is known. We do try and impart specialized skills to our sales people. In fact, quite of our sales people are designers. I'm a designer myself and so that tells you. So, I do head marketing now, but before I started my life in Tata Elxsi I was designing motorcycles elsewhere. I started to do design in Tata Elxsi. I built the design business and then at some point I moved into marketing. Right.

So, you would find this constant movement of people who have been in design, who have been doing very specialized technology development then moving into sales role because you find that they are able to have those better conversations with customers. You're trying to spark ideas, thoughts in the minds of the customers. So, it's not enough as a classical sales process. This will be more of a pitch and concept-selling process. To that extent we are building our capacity and capability there too. Is it always enough? Never is.

Participant 6: Good evening sir. Sir, first of all I just want to congratulate you guys. Most of the industry seems to be in flux but we are seeming to be the cutting edge and earlier than most of the larger players. So, firstly that. Secondly, thank you for hosting it in Mumbai. My question is more regarding nonlinearity of revenue. You clearly mentioned that your industry is very dynamic and the more dynamic it is a better for you, does that -- are you alluding to the fact that it's not so great when it comes to, you know, monetizing the IPR that we have and is that something we can work on going ahead. We discussed this last time as well. I just would like you spent a few minutes on that. Thank you.

Mr. Pai: If you see the IPR scenario or landscape all over the world, it is also changing. 10 years ago, we didn't have open source, we didn't have full frameworks for doing work which were in the public domain. So, more and more IPR enabling is now happening through open source collaborations. So, that's not owned by anybody but using open source to create a solution which is customized is where companies like us, see us as differentiating from others in the future. I personally don't think that there is a great opportunity for us to have full reference designs of any product

or any service which can remain relevant for more than 15 to 18 months. So, given that pace of change, you know, our approach to IPR itself has to keep changing.

Participant 7: Good evening sir. Congratulations for a wonderful year and, you know, thank you for hosting us today. I have two questions sir in particular regarding technology front. The first question is regarding the importance of LiDAR technology and the pioneering aspect because Ford is working on LiDAR and they are working and investing heavily in the technology, but as per Tesla and lots of other companies, they are focused on, you know, moving more towards camera and radars which they really feel is more important because they can commercialize it much better. So, I want to understand that aspect from you as to how things will go forward. And second this is - the most important question is over-the-counter and deep learning. Most of the companies today are investing heavily on algorithms in-house and they are somehow working a lot on generating you know, in house capabilities. How do you see yourself you know, breaking the barriers and entering the German as far, you know, because Tesla is doing in-house? They are adding engineers in-house. They are working a on a lot of self-driving capabilities which they have already pioneered. So, how do you see yourself positioning your business units in the different parts of the world?

Mr. Pai: It's okay. So, if you think about sensors I think the type of sensors, the nature of sensor, the cost of sensor, and the capability of sensors are evolving. Fundamentally radar has been around for the last 60 years because it's just a pre-second world war invention, isn't it? It has taken this period of time to apply it first to monitoring aircraft to being commercially available and applicable to cars. So, the way I see it the journey is not yet over. It's too early to say that radar is better, LiDAR is better, radar is less expensive, LiDAR is not. So, I think they will all have a place. I think we just had to wait for all this to evolve a little bit because only now there is a lot of money, investments and R&D going into figuring out how to reduce cost and how to improve the performance and the capability of the sensor.

So, we are currently working with LiDAR, there is also something called L-E-D-D-A-R if you know, and it uses LED light rather than anything else. You have radar, you have ultrasonic, and you have imaging cameras. Imaging cameras are themselves branching into mono and stereo. So, in my view the way I see it any framework that you have has to do two things. One it has to be able to provide for multiple sensors either of the same type or of different types. It has to be able to fuse the data and that fused data should be made available to different algorithms to predict different things.

So, we are working on the software that abstracts all these sensors. So, we are very clear that we are not going to be worried about what will happen to sensors. We are only very sure that there are going to be more types of sensors and these sensors are going to improve in performance. So, our job is to make sure once that data is available from the sensors, how do I fuse it and how do my algorithms now process that data to give you a sense of direction, a sense of decision making and so on. So, on hand, we are abstracted from the sensor problem, but I think it's too

early to now say or gospelize that Tesla is on the right foot and Ford is not or other way around. I think it's just too early. I'm sorry, I forgot the reference to your second question.

Participant 7: Yeah, the second question was about the overall business and, you know, how do you see yourself positioning your business units to, you know, different parts because deep learning happening in-house in certain companies and how you see this stream of revenue work I mean I'm more concerned from the business point of view.

Mr. Pai: Right, so, I don't think deep learning is all inside companies simply because there is not enough capability anywhere in the world for you to internalize everything to say I will do AI myself, I will do deep learning myself, I will do machine learning myself. There is just not enough talent around the world, right. So, to that extent I would not know about Tesla so, I can't tell you whether there are contractors working with Tesla, but I believe that the problem is too large. The skills required are too specialized, the knowledge bases are too scattered, for any company to say I will internalize the entire problem and the learning curve has just started.

So, it's too early to say I'm good enough that I will do everything myself, part 1. So, that's why the ecosystem is relevant to every company in the world not just for Tata Elxsi. You will have to work with somebody else, right. For us, we are not trying to solve every problem in the world. That's why I also made it clear that when we are investing in digital at this time we are very focused on saying what parts of digital applied to the verticals that we're playing in. So, how does AR-VR apply to broadcast or to automotive, how does machine learning apply to making network prediction better; so, for example, we are working with US operators to predict the failure of their networks. You have got to a point where we can predict 70% of the time correctly, three hours in advance when their network will fail. This is pure artificial intelligence based work. So, we are very clear that we can do everything in the world if we wanted to, but we have to be very clear as to where we will drive the maximum value. It is where we know the domain first and then we bring in machine learning on top - then we succeed. So that's my statement.

Participant 8: Sir I have a two-part question. So, how do we see competition from Tata Technologies, that's one, and the other is what is the scalability that we are seeing within our top 10 customers. We see that as, you know, really pushing our growth up within our top 10 or we see may be more new projects in the non-top 10?

Mr. Dev: The second part first. We certainly see our top customers helping us grow faster than the new customers that we bring in - the smaller customers. In percentage terms it may, the smaller customers may grow faster, but in absolute magnitude, the growth really comes from our top customers. As far as I know Tata Technologies, they are a very car centric Mechanical Engineering and Analysis Company. We have tried to stay away from their domain as much as we can. The only mechanical engineering that we do is to support our own design effort so we are primarily in electronics and design.

Participant 9: Good evening. My question is regarding, you have a huge dependence on the JLR for quite some years, and I think 15 years of business. Is there no other break through what has happened with the top 5 or top 10 OEMs? So, do you need to be part of some kind of consortium to make a bigger inroads rather than opening your office in Silicon Valley and selling out credentials with German car maker or to a European car maker who have their own ecosystem that they have built over a bit of time, so you could have may be short cycle, you would have change the cycle significantly if you would in part of the bigger ecosystem like the way German would work with the German. So, what is holding us back in this overall scheme of things?

Mr. Pai: Right. First of all I would say that while JLR continues to be our largest automotive customer but as you would have seen in that video, we do work with the other big brands within the automotive space too, so there itself you would've seen the other two luxury car makers from Germany on our logo list. So, we are working with them, but you have to remember that JLR has grown for us over 16 years, right, so you have to give us some time because, one; customers take some time to scale specially in the automotive space, not all projects start with a big bang. Equally it takes certain amount of time to build that capacity and understand the customer processes that we are working with. So, it takes a little bit of time.

So, I think we are doing fairly well in the automotive side in terms of adding customers, adding customer logos whether it's OEMs or suppliers. I don't think that's a problem. We just had to give time to be able to scale every one of them to being as large as what they could be. As far as competition goes, yes, so we have taken a careful look and we find that we have been accelerating the partnerships and alliances that we are now part of over the last one year. The significant acceleration in terms of being very careful in selecting specific technologies that we believe are going to rise. For example 3D graphics and DISTI, security in the car so we tied up with a partner to be able to bring cyber security into the car. So, we are picking up very carefully spaces that we believe are going to be important in the future and we are trying to plug those gaps by assessing what can we do and where we need partners. I cannot comment on another company's strategy but I think we have our partner strategy for where we think it's relative to what we are doing and what our customers want.

Participant 10: So luxury of second question and last question --- you did one partnership with Panasonic and if you could explain in detail that what does that scope of Panasonic partnership is and does it put you or lead to different level and is it a global partnership or does it specific to India centric and is it - I mean which are businesses it would cover because Panasonic as a multi conglomerate so which all business area it would impact and is there any some kind of scope or business opportunity with them and how deep is the engagement. Thank you.

Mr. Pai: So I'll just refer to what we announce publicly for now. So, what we announced was an offshore centre of excellence that we are going to be establishing for Panasonic Appliances. So, appliances is a business that has all the consumer facing goods. So,

right from TVs to washing machines to small kitchen appliances and so on. So, our announced partnership was to set up a centre for them that will focus on two things; it would focus on bringing design and technology together for products of the future, and two, how AI and Robotics would impact these appliances because we understand globally what is going to happen with appliances is that two things are going to happen; one, appliances, any consumer devices are going to be more easier to use because it can talk to you, you can talk to it. It can hear you, you can use gestures and so it's not going to be only buttons and dials that you have to press. Two, the direction of ageing societies and so on, that is another trend and convenience also means that a lot of the functions that you now see in appliances logically should be done by themselves. I am not saying we are doing this for Panasonic but think about it, a washing machine that could load itself, could unload itself, could fold or even press clothes. What would you think of such a machine, and logically if you think about it that is the direction that appliance should be going unless you find some other way to wash clothes altogether.

So, in some sense what we are doing with Panasonic is to help them think through the future of appliances bringing in AI and Robotics. So, it's digital on one hand, it's design on the other, but we do work with Panasonic across other businesses. Those are not public but we do work them rather globally across businesses.

Participant 11: Thank for hosting us. My question relates profitability. One thing that stands out in your financial performance apart from revenue growth is the way you have maintained margins throughout and this is despite multiple headwinds including A, the severe currency volatility, B, wage revisions so and in the positive context if I see the kind of work we are doing, we assume that you'll probably have higher realisation across most of the clients and projects. So, in this particular scenario where you have sort of headwinds and a tailwinds sort of better realisation for projects, what sort of the outlook would you have on your profitability going forward in the longer-term scenario?

Mr. Dev: See, all our effort has been to maintain profitability at around the level at which we have maintained. It will vary, it will not remain absolutely constant but on an average, we want to keep it where it is and what enables us to do that is a very close watch on cost. My colleagues from our finance department do an excellent job of monitoring our cost. We have strengthened the commercial function in the company to keep a watch on what is still not in the books, you know, how the trends are looking, how much is the consumption of effort that is going into every project and so on. So, the commercial department and the finance department do an excellent job of monitoring our cost. If at any stage we think that by compromising a bit on profitability we can accelerate our growth, that's a call that our board will have to take, we will present that option to them and may be for a short while you may see us growing faster than our profitability if they allow us.

Participant 11: Sir just one follow up on that. So, despite the currency issues we've had last year and so if you can just give us one particular reason or what metric have you utilized, is it better employee utilisation or better realisation what has helped us maintain

margins this year, if you can just name a few and then the second was we have a good amount of cash on our balance sheet. Any sort of outlook on how do we intend to use that in the future?

Mr. Dev: See, other than saying that we've kept a close watch and we've watched the ball closely right through, I really can't give any more details on how we've managed the headwinds and currencies. In terms of the cash, yes, we have a bit of cash. Ideally we'd like this to grow a little more so that we can put it to use in terms of inorganic growth and that's what the strategy has been - hopefully, we'll get there pretty soon.

Participant 11: Sure. Thank you so much.

Participant 12: Good evening sir, I am from Alchemy Capital. My question was that when we speak to product developers like the OEMs, they say that they only outsource some of the basic functions like testing of their own solutions and may be only outsource some non-critical portions of a product. How is Tata Elxsi different and to what level of outsourcing have our customers done to us and have we been able to really enter you to some of the critical aspects of the customers, products or services which may possibly have much better margins also?

Mr. Dev: See, the work that we do is a mix of various things and if you notice in the presentation that Nitin made, we showed you some examples of cutting edge work that we have done for customers including a product which is for the Indian market, the Airtel hybrid set top box, that certainly wasn't low-tech work that was outsourced to us, but at the same time sometimes to get into a relationship with a key customer that you have targeted, you have to take whatever comes your way. So, as long as in each customer organisation you are increasing the value of what you are delivering, you are increasing the technical capability that you are bringing to the customer. As long as the trend is positive, we are happy doing whatever comes.

Participant 12: And sir if I may add - what timeframe do we generally see the conversion from the low tech work or the low skill set work to core function?

Mr. Dev: It doesn't necessarily always start with low tech. For example with Airtel, we have not done anything low tech before. We straight away went into this. Same with Avaya. It really depends on the customer, how dynamic and fast moving that part of the customer organisation is. As you know, Avaya is a very old organisation, but the part that we were working with they were faster than most start-ups in California. So, we move very, very fast with them. Yet there are other organisations where the pace of change is slower. We just have to adapt to what works.

Mr. Nilesh: Hi sir, my name is Nilesh Wagle. I had one question about wanting to hear a little more about your thoughts on inorganic or acquisitive strategies. Given the specialised nature of your work in various verticals and the skill sets you need and also therefore the challenge to sell to customers and establish your credentials, I

would have expected to hear a little more about focus strategy to acquire or either partner in somewhere with start-ups and specialised companies in your space, but we haven't seen much of a history along these lines. You did mention use of cash for inorganic means. Can you spend a little more time talking about what are the thoughts and how you would engage with these opportunities?

Mr. Dev: Sure. An inorganic growth opportunity for us would have to be one that either brings new capability to the company which we covet and do not have or gives us access to a market place which we would otherwise not get for a long time to come and it should come at the right price. So far we have not found these three converging, these three dimensions. We are not, you know, a company with 10 thousand crores of cash sitting nearly idle which goes out on a shopping spree and buys whatever it thinks is relevant. We have a little bit of cash but for any significant acquisition, we would have to even borrow. So, we have also got to see the cost of borrowing versus the return that we will get and so on. We are on the lookout constantly. We have a group in the company that looks at inorganic growth and, you are right, we haven't made any acquisition so far but that doesn't mean that we will stay there.

We would be running out of time very soon so may be another -- last two questions.

Participant 13: Thank you sir for making a wonderful presentation.

Participant 13: Couple of question sir. Like airports, we already have the entry now, the railways stations are getting into the modernisation mode and I think it's a new area which is happening. Probably with the largest railway network in the world, I think you have I think a big opportunity out here as well. The second important aspect of the opportunity which is opening up with smart cities and I would like to figure out what exactly you guys are doing in that area. If you could spell out and explain in detail I think how exactly you want to position yourself?

Mr. Dev: I will talk about the railway stations and need Nitin to talk about the more complex one in smart cities. See, we started out talking to the railways more than two years ago. In fact, we have done a fair bit of work without fees just to show them what can be done with railway stations. Some of you may have read a story that came out about two years ago from the divisional railway manager of, under whose charge Pune station comes, that how we have come up with a new concept and design to show them what is possible to do in the railway station without necessarily having to spend thousands of crores of rupees. But the railways is a very complex organisation so while this proof of concept was done, the then Chairman of the Railway Board said that we should take up modernising stations on a partnership basis where they would not pay us any fee. We make the investment and we derive a return from the advertising revenue that gets generated from the railway station. We are not in that business at all. We are neither a civil contractor nor are we an advertising agency or an advertising channel.

Then in its next incarnation of railway station modernisation, we were commissioned to do a limited design work for four identified railway stations, and again we were told that we should do it free to just establish our credentials. We executed that also and then came this RFP for I think 15 stations with an enormous budget and very heavily oriented towards civil works rather than passenger experience. So, what we are trying to do now is to see who are the likely contractors who will take up the civil work and to work through them in improving the passenger experience. Now on to the smart city.

Mr. Pai: So I think there are two parts. One is the definition of a smart city because we look at the definition of a smart city especially whatever has initially been drafted. It is to define basic requirements of a city less to do with smart but fundamentals of what delivers reasonable citizen experience and assured service. So, to that extent, I think smartness is still a little way to go. It is starting to define what city should really have in terms of infrastructure, in terms of the backbone of services whether it's water, sewage and so on so forth. So, to that extent, I think there is a little way to go for smart. That is part one. Part 2 is we have also been keenly following up to see where it is really starting off. I would assume there is some amount of delay in terms of actual implementation of the various pilots happening here and there and so on. A lot of these pilots are funded pilots by the companies that are trying to demonstrate what they can do and what they can bring to those particular municipalities or to those cities so to that extent at this time in my view and this is my personal view I don't see the money as yet, to be very frank. So, once we see the money then we know what we want to do to get that money. So, we need to see action, we need to see areas that we can deliver on, and three, we need to see money. I think whatever lenses we are using, we're not seeing all three come together as yet.

Participant 14: Hi, sir. I basically have two questions here; one is a follow on question for the previous one which was asked. It says if you have already done the core technical work for a big OE, so does that also constrain us from winning any other bigger OEs in future and, you know, in terms of client acquisition, is that a constraint that you face?

Mr. Dev: The way our contracts are structured is that if there is a restriction that only applies to the engineers who worked for that particular customer and that also the short cooling period before which they can't be deployed for a competing work. So, it's not that if he works for one particular customer and an industry, we are ruled out of working with the competitors in that industry.

Participant 14: Right. Second is -- you know I was just hoping that someone who would ask some question on the medical devices, you know, that seemed to be a again a segment where there seem to be a lot of entry barriers, you know, and what I understand from our previous interactions is that at least two to three customers in US is what we are working with. So, one, I would like to understand what is the nature of work that you are doing with these two-three US customers, and the second, are you

working with some number there, are we targeting some numbers in terms of revenue and other things in next two to three or maybe five years here on.

Mr. Dev: Before sharing with you on the kind of work we are doing for these companies, the fact that we are keeping this business growing shows that we strongly believe that there is very high potential. You are absolutely right, there are enormous entry barriers and we are not confining ourselves to one approach and seeing where that takes us. We have multiple approaches that we have been trying. We've had some success recently, but still nowhere near where we wanted to be but we still believe we are on the right place, we have the right capabilities and therefore we put our mic behind this business. Nitin will describe what are the kind of engagements we have.

Mr. Pai: Just to note is that when we referred to these two, three customers that we added in the US, couple of quarters before, that was new customer addition so that is not the only customers that we have. So, just to make a point we currently engage with customers in Europe - very large medical companies that are based around that region. We work with companies in Japan, we do work with companies in US and they are not necessarily all large sized. You would have noticed that we made a press release two days back of working with Hemex Health. Hemex is really a start-up. It's come out of technology out of the University of Portland and it is targeting diagnostics for emerging countries. So, what they are saying is that currently Malaria for example is detected very late. It comes at an expensive cost and we don't have enough access to such diagnostic labs in rural settings so the technology that Hemex Health is working with is really the ability to bring the lab into a single box. Also, the ability for that box to work in any kind of environment operated on a battery and with very little skills to operate.

So idea is then to take that into the rural hinterlands and then be able to do a malaria test very early for less than a hundred rupees. It's fantastic technology, and for us, it's wonderful to be able to work on technologies that are not only for the big, big names. But the point is we are trying to work with start-ups, and why, because we find a lot of innovative product development happening in the diagnostics, lab on chip space with start-ups both in the US as well as in other regions. So it's a mix of areas - primarily work happens in diagnostics, therapeutic care and patient care in terms of categories of devices.

Participant 14: Thank you.