

Infosys Technologies Limited

2006 ANALYST MEET

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Session 3 by Arun

Arun

Good Morning everybody. My name is Arun Ramu, I am the vice president heading the independent validation unit and our basic area of interest is in third party validation of software. Quickly moving, what IVS does is that we provide third party validation software, which means that we try to stay outside the development cycle, we do not try to participate in the project development and we provide only validation of certification software, which means that we certify that any software is fit to use in the market oriented production and things like that. We have worked with clients all over the country, all over the world and we are participating in all industry verticals as well. We do cover everything that Infosys covers and we are across the globe. In terms of the people, we have three basic streams of people. One is the validation experts people who are very good at testing, who can do thorough testing, who can do optimized testing to make sure that the business risk is minimum and then we have the second set of people who are domain experts. These people are people who are experts in the vertical that we are working in which means that they come with industry practice knowledge or they are certified in that particular industry practice. The third part are the people with technology skills. These are the people who will do performance testing and things like that, and that means they will need to know the platforms and the intricacies of the architecture, the performance management, memory management, and things like that. So these are the three pools of people that we bring across and where we do that is actually we have an IVS academy. This academy today has a throughput of about 500 people every quarter. We train people on all the way from testing basics to testing performance testing, test strategy, test management, and all that. However of the 500 people, only about a 100 are so are from the IVS scheme, everybody else is from the rest of Infosys which means that we do train a lot of people for regular development projects also to do testing and so on and so forth, but we do not participate in the actual development projects.

This we find is one simple way of making sure that we have the capability to go out there and grab the market and we have been pretty successful doing that this year. In terms of the expertise in the areas of the work that we do, we work all the way from test process and strategy consulting which is the top of the line to down to you know regular business process validation which will be manual in nature and so on. In between, there are test process and enterprise performance searching solutions which are basically a performance testing and the model that we typically use in these testing center of excellence model which means that we do not do projects by projects we do it as a annuity business or X number of people working for multiple testing projects, multiple testing releases, across the customer, and that particular test center of excellence can scripts span a globe and could be working with multiple lines of business within the same customer. Today, my largest testing for excellence does exceed 200 people, that is one customer across the globe for 200 people. Test automation framework and solutions are the way we see going forward. Basically, test automation is catching on now. The initial way was to just offshore testing so that we can reduce the expense of testing itself and now people are realizing that if they did automate it then they will have lot more to gain from that. That is what they are doing at this point of time.

This is a guesstimated market size, I say guesstimated because so far no body has really put a number on that, no analyst, no Gartner has put a number on that. I have taken the IT services market for development integration which was 200 in 2006 and have taken 22% of that as part of testing and even if 10% of that were to be outsourced, you have close to you know 4.64 billion working, that is the market size that is looking like, and just to give you another point of view, today the entire IT market is actually 600 billion; so, if you multiply that by 3 and we still be in good shape. The only point I am trying to make with all this stuff is that you have a huge market there and it is fairly new and there is a lot more to get out there. This is what it looks like today. We have over 80 enterprise customers in different verticals and 20 product customers, product testing customers with about 80% of repeat business and about 2700 employees across the board. That gross is actually a percentage of the Infosys



revenues that we are getting to. So, what you are going to see is the fact that Infosys is growing at 30% and we are growing above that on that number. It is not probably very obvious from this graph but that's the way it is. In terms of the vertical split, we are quiet heavily on the banking and capital market side, that is the way the market is. The communication service providers are the fast second placed winner. We are doing a lot of work in retail, hightech and we also work in all the other industries where Infosys works in. In terms of Geo split we are very US focused and we are trying to change that this year and we are hopeful to have more business from Australia and UK going forward. In terms of what we are trying to do in this market, this market is pretty nascent, which means that the market itself started about in 2000-2001 and that is when this unit also picked up. Like you said, there is about 5 to 6 billion waiting to be taken whereas all the Indian providers put together have done only about a billion dollars so far. So, there is a lot more to be taken and the people who are going to gain market share, are going to be the one who are going to bring some level of differentiation into the market and that is what we are trying to do here. To illustrate this fact we have a huge number of domain certifications that we do for every domain that we work in apart from hiring people with the domain skills from the industry itself. We also have our other people certified in different certifications based on which industry they are working in. This is just a sample set and apart from that we also certify in the basic testing skills and so on, and the tool skills the Mercury intranet certifications. We also of course have people who are project management certified to make sure that our projects are on right path. So capability building has been a significant investment that we have made in the last year and a half and that is paying off now. The other thing that we have invested in is in solutions and frameworks. What is happening is that we can continuously keep adding people to the team and keep growing it but we see that that is not the real way to go forward because it will finally get traumatized. The only way to really go forward is to build solutions and frameworks which will increase the revenue productivity as we go forward and we will have better control over what we are doing in terms of projects and so on, and given that situation we have been trying to generate or build new tools and frameworks that will help us improve our productivity. One of the other things that we are doing apart from Accord and lighthouse tools, is the reusability factor using reusable texts accelarators for process testing. This means that we file and allow reusable chunk of testing that can be used in the same industry and two different customers, right. Like if somebody wants to be Sox compliant, then we certify them and we can use the same set of test cases elsewhere. So, given that situation what it gives to us is that we are able to come in and do the requirement study in a very short period of time. We are also able to turn around the whole thing in a very short period of time and ensure that there is a very high productivity and then if you add six files on top of that you can make a lot of margin. The other thing is we are also trying to fix price the test center of excellence, we got a couple of customers who are willing to do that. What that gives is that the test center of excellence normally has you know there is a reluctance today that the non-fixed price people are reluctant to move into automation because they have to invest a lot into automation before they can get any thing out of it. So, what we are trying to do is fix prices so that we can actually take the cost of the tools on ourselves and improve productivity and keep the productivity gains mainly to ourselves. So that is the basic fixed price case model that we are looking at and then of course the risk enterprise performance management solutions you know makes our service offering in performance testing with what our other units have in the operating unit and now we have a performance management solution which is becoming an actually design the management performance of the application we tested and then they verify the model to them. So, all these are the things that we are trying to do that would make sure that we stay ahead of the curve. In terms of what would happen in the market today in terms of competition, many of our IT service vendors are just about starting. There are three or four of them who have started along with us; so, they do have that advantage, but most of them have not yet picked up. However, the market is still big and there is enough space for everyone in the market to pick up enough business. In terms of the customers, large enterprises are actually asking us to do worldwide themes, like I mentioned earlier, I do not know, probably not in this session anyway, the first time when they would ask for 20 to 30 people and to start with in the public. Today, most customers start with say let us start with a 100% fee. It shows that the shift is very huge and people are very taking into this test center of excellence kind of model where we start being shared services right from day one.

The other point is that the industry analysts like Gartner and EMR have now started writing about testing which basically signifies that we are a separate industry by ourselves now and they will follow us and they will follow some of the data and so on and so forth. So that is a good thing for the testing industry. Then finally I only mentioned some of this before automation and reusable frameworks will start getting bigger as you go forward, customers are realizing that there is a lot to gain out of that and we are also planning to push that so that we can handle the resource requirements accordingly.



So, to summarize, the market opportunities are huge and offshore is predominantly where it is being done. Resources, there is a scale problem because the market is so huge, there is huge demand for people who can be in testing and we are managing to do that through the IVS Academy. We also hire alternate talent pools in which we pick up people from the industry who have four to five years of industry experience, we pick them up, train them in testing, and then use them in our projects. To battle the commoditization that is happening in the market, we are actually trying to look at higher value services and go to market solutions with our tool vendors like Mercury, and of course finally influencing our community. Being a very nascent market, people do not even know that there is a career path in testing. This is probably like nano technology, very few people know how to get in there. So, given that situation, we are trying to educate the student community as well as the testing community that is there today and we do a lot of international conferences, papers to create awareness, as well as talk to a lot of university students and even teach lecturers on how to teach testing and so on and so forth. We have been doing a lot of that stuff so that we are able to make sure that we have a bigger testing community going forward.

I will quickly go through this last one case study, then you can pose questions. This is a leading wealth management and global investment banker, and these folks about two years ago used to use a lot of subcontractors across the board and each of the subcontractor was not really a part of the unit working like that, each guy was a separate individual subcontractor and they were finding it very difficult to manage that mode as well as the fact that the subcontractors when they came in each guy would use his own process, do his own thing, his own fee, all of stuff. Given that situation, they were finding it very difficult to scale that up and that is when we stepped in and offered them to do a test center of excellence and what we did was we took over those 100 persons, I mean we replaced each one of those 100 subcontractors and then we actually started doing wave two where we standardized all the tools and processes and things like that and then wave three, where we actually went and started doing better and better productivity improvements in tools and all that things. So that is how we actually took it on and what really happened is in the bottom there. When we replaced the hundred, we saved them the three and a half million because all of those hundreds were on site in Europe and so replaced each of them with our guys in off shore. All of our guys are off shore. That is the initial cost savings that they had and then based on that you know, the efficiency gains, what happens is that when you have a pool of resources, we have this pool of resources working for one customer with standardized processes standardised thing, we started getting efficiency gains out of that and that is basically the 5 to 10% annual savings is all about. Improved quality and reduced cost of owner ship, now improved quality basically means that if you test better if you do better optimized testing what will happen is that the product that is going out in the market is so clean that you do not need to do any more maintenance and maintenance being the largest chunk of any product life cycle you know, any savings in that area means a big deal to the customer so that is what it means by reduced costs owner ship and of course probably that bulleted has come one above the other but lesser than 1% of defect leakage is what we typically tell our customers they will get within three months or less of that. So by doing that we were able to make sure that the customer was able to deliver really clean software to the customers to his end users which meant that they were very happy using that as well as the fact that they do not have maintenance and call centers costs for that which would reduce a lot of cost of our customer. so that is the way it was.

What are the	not within the	(Not audible)		
We have had customers we that customer has already you have these absolutely you see zero defects you defects, so once you get it be a part for it. So the improvement in some corrections	y has seventy five and w y perfect software comin u cannot some how you in there it is very common demand is very heavy	re see that happening out there is a widu get addicted to the notes and every body were seen that the seen and every body were seen that the seen and every body were seen and every body were seen that the seen and every body were seen and every body were seen and every body were seen that the seen and every body were se	ng very frequently across cket you cannot go down hat and above one betweet by different lines of busivants it and shows that	s. It is like this when a wards after that. If ween less than zero iness to come in and there may be some

Ask me if you have any questions.

the largest it is about 250+.



Yeah, not at this point of time, at this point of time it is a new industry so I mean although a lot of customers are asking for it, satisfying the bigger ones is itself is taking a while.

In terms of the resource skill in terms of computer skills or engineering skills. What kind of people you look for and in terms of billing rate how it is different from the Infosys average billing rate because I believe the offshore rate is higher so does that mean that your billing rate is lower and the margins are almost similar to the others.

Yeah okay. In terms of the kind of people we do have about 20% of our people who are non engineers and the rest of them are engineers. In terms of the billing we have three levels of service which of one is business process testing kind of the thing which is manual testing that is at the ADM prices, the next two levels which is one is performance testing, and any tools and extra skill at level testing and definitely more than the ADM rate and then consulting is the next level.

The	if	ves.

Yes, yes that brings you at the product company because you talk those are higher reach, but that is not the new market that market has been there for a long period of time and that is not the new market and the new market is in the application and enterprise applications. Large applications wanting different kinds of applications, customer ERP applications all those things.

The total number of end users and ISV's that you have right now.

The total number of end customers and ISV's

The end customers and .

Yeah the 80 of them are applications and enterprise applications and 20 are ISV's product customers.

Actually my question also was partly on the people pool, to what extent do you think that you could really manage with lets say with non engineers and retrain them and what is the minimum requirements that you may require.

It takes a six weeks to change them to testing professionals.

But for instance would you be able to operate with a bachelors of Science or B.Com.

Yeah, that is what I said, non engineers are Bachelors with B Com any body with a maths degree. We have gone so far with anybody with a maths degree.

So that seems that your pool could much be larger than these.

Yeah, the only thing is that we started that about a year and a half almost two years ago again we still have to see whether the first batch of two year olds will get US Visas and we guess that they will get US Visas since 75% of our business comes out of US/Onsite so not a getting a US Visa will pose some problems

So far you didn't have a chance to test them.

Yeah, it will come up now. We have applied for some of the visas this time.

And second thing is on you know, cross selling to existing Infosys customers so what proportion of your business today is from existing customers.

So most of my customers have always been existing customer like out of the 80 what we are talking about application enterprise and application customers so 20% there itself of the total customers that we have. Out of that about 3 to 4 probably were absolutely new to Infosys itself which shows that the demand from existing customer is so much more that we do not necessarily go out and sell it to others.



Sir,you said that average number of people in a particular job have increased multifold with the result that the client will say that they would need in excess of 50, 80, or 100 sir does it mean that the average tick size of a particular contract has increased over the last one year. Tell us how exactly this has happened.

You know that , the way we are working within the test center of excellence so I think, which means that we build a service layer with 100 people or whatever the number is so in that sense the contract is for one year of 100 people so size of it different that's it, earlier it used to be 20 people for a year and now it is 100 people for a year.

Sir if you quantify in terms of the average ticker size of a particular contract and how has it moved over the last four quarters. On an average if you could give some kind of a ball park figure.

I will be guessing it as I don't have the figures for that.

One question, you know, on guesstimate to you have not increased any share of outsourcing and what is the reason and thought behind that.

Yeah that's what I said it is a guesstimate, I mean it is something that I had put together to convince the board that we should do this business. Right.

Sir what I believe is that no more could be added.

Like I said most of that is being done out of the big service providers from India.

Right.

So obviously it will be lot more than 10%. But all of the 22% that you are talking about in the previous line may not be outsourced.

Right.

I am saying out of the 22% 10%, so I mean than can grow all the way out to probably 50% or what ever in that rationale

Sir you said almost Indian market share is about 1 billion right now.

Yeah.

Who will be the main contributors all you can know.

Main contributors of that would be Wipro, Ourselves, Cognizant, TCS

Amongst the global names.

Global, see IBM and Accenture don't really see again TCS doesn't and even Wipro does not declare testing revenues. So I am just guessing because I have some friends there. I know Acenture and IBM do not have a testing service as a line. TCS has just started one about six months ago. Nobody writes about it so I have no idea of that.

Third party stand alone we would be definitely in the top two or three.

Yeah I would guess that would be you know including in house.

But the demand is less there.



See basically from again these are all industries numbers and overall figures about when ever a software is released I mean without serious testing they are abut 40% of defects and it could be at 30 to 40% of defects which means that it can be 60 to 70% clean. We move that up to 98% so that is the big chunk and it again depends on the fact that there are criticalities of these defects right if I mean if some guys are just going there and doing critical defect findings and getting 60% then they are probably are still pretty decent. But in this 60% of 70% are they doing random testing which you say or is it a planned testing, all that matters. What we are saying is that our planned testing is optimized in such a way that you will see only 2% of defect in those.

Yes over a period of time, but the problem is that testing is in spurts that they deliver something then we test and they deliver something which we test and it keeps going that way, given that situation we have been struggling at finding a good model to do that and our customer and we have recently worked with a few customers who are willing to take that charge.

I , See they have not come back with the statement yet but according to this is what they verbally say on the phone and they will continue to do that acts. HP brought them out typically for their ATG project which is more on a non testing side. And as per the testing side we will remain as it is, just like IBM bought out Rational the testing portion was a very small portion of what they wanted they wanted the rational unified process actually and that's what they wanted to own and that 's what they bought out. So here also they brought it out for ATG which will help them to compete against Compuware and all the other guys. Not so much with the testing bit service will remain you know, as almost as a separate product sweep. The only good part is that the core of the ATG sweep is testing. Because ATG is managing applications across the globe and to manage applications the way you do it centrally you test, is it up or it is down you know that kind of stuff, is the transaction rate high or low and all that is part of the testing unit. So as they improve that the testing also automatically improves.

At this point now do you do not see any service oriented thrust.

Infrastructure management has a bigger picture.

Thank you.