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Arun Ramu

_____ Tata Infotech and five years after that I was Trident Software which was a startup in Bangalore. And the last five years I have been with Infosys and four and a half of which has been in the area of IVS as the head of the unit. Now quickly to introduce IVS itself. What we typically provide is third party validation and testing solutions to clients. Now what that means is that in the earlier days, even today the Indian folks provided all these services from requirement specification all the way to design, coding, testing, integration testing, and system testing, while we provide services beyond that. We provide services in the user acceptance stage and so what we call black-box testing, meaning that we don't look at the code, we look at just the functionality and the business process and so on. We have just partners and trusted advisors who advise our clients, so that they can setup their QA departments and fulfill their QA needs. Infosys also provides a career path in testing and which I think is extremely important for a good testing group to have. We have seen that before we had this group in place, IVS in place, Infosys like everybody else today used to use developers as testers and that has been quite a disaster because most developers don't want to be testers. So we had actually one of the best things what we did was set up a career path in testing and then ensured that the quality of our testing is really high.

The next one is the fact that the resource pool includes validation experts, meaning people who can do good testing, people who have business domain specialization who are from different verticals and who understand different verticals and technology specialists who can understand things like architectures, networks, databases and so on whom we use in performance testing and those kind of activities. So it's a very mixed level of skills and if you notice none of it is in terms of programming. So we try and stay out of programming as much as possible. The validation expertise spans across numerous areas such as business process validation which is the biggest chunk where we do a lot of manual testing of business processes. The second one is in the area of test process and strategy consulting. Here this is a high-end service, typically six to eight weeks of assignments where we actually we go to the customer and talk to senior folks and try and setup their testing services as well as if required fix the test expertise processes and things like that. Another area where we work _____ performance testing solutions and where we are testing enterprise applications for performance. Typically this would mean that how quick your transactions are running, which means that can your transaction done in a few seconds or does it take a few minutes for the database to respond and so on. The other thing that is catching on really quickly is the testing center of excellence where customers are saying, please set a team for me of 20 or 30 or whatever and make sure you test everything that we produce because it goes into production and certify that. The last one that the area that we work in is test automation where we actually automate testing that's done by us and that ensures that the productivity levels also go up when it is in testing.

In terms of our reach, we actually work globally. We are a horizontal, so we work in all geos and we work for all verticals that Infosys works in.

Now before I get into the _____ let me just set a context to it. The testing market that we are talking about is the enterprise testing market which means that I am leaving the old product market out and we think that this is an estimated number simply because the market kind of started getting there only in about 2001. So if you look at it Gartner says that IT services market is in the range of about \$ 200 billion in 2006 and we also say that testing typically is about 25% of the market which means about \$ 50 billion which means that if you take even the measly 10% as outsourced testing services which it would be in the range of \$5 billion. Now this is an estimated market simply because nobody has written much about it at this point of time. So we will have to wait for people to come back with data on that.

In terms of revenue split, vertically we are more or less aligned with what Infosys does in different verticals and the second vertical is not into here because this is last quarter's data and we are starting to work with all the other verticals too. And I am sure when we are in steady state we will do almost equally as the rest of Infosys does.

In terms of geography, we started the business in US and hence the business chunk in US is quite large. Europe and Asia Pacific are quickly catching up and will form a significant part soon.

In terms of metrics of the unit itself, we have about 45 enterprise customers and we also have about 20 product-based customers which means that product testing kind of work. Around 80% of other business is repeat business and we are in the range of about 2,250 employees and our onsite effort is about 25%. And the graph there shows you the kind of revenues, the percentage of Infosys revenues that we have been doing in testing in various quarter.

In terms of what really makes us click and what gets us business, the differentiators are basically superior skills through validation through IVS University. What we really do there is conduct six weeks of intensive training. We also have invested in large in labs in 3 of our development centers with various test tools and other machine tools. And we also have a specialized performance testing that is trained in architectures, databases and so on. So that they can do a good job of doing activities. I would like to mention we do have a lot _____ level expertise, we do have a lot _____ expertise and to ensure that the market understands this well, we do go through domain level certifications like LOMA, IAQ and so on. And these are just some of them that we do, there are others in the retail area and so on. We also do certification in the area of testing and QA itself.

In terms of alliances, we are tied up with Mercury who are approximately 60% market share owners and we are trying to go to market activities with them.

In terms of solutions, the basic solution that we provide is a test center of excellence solution which is a managed testing solution. And we also do different industry level certifications or validations like the Basel 2, SOX etc., and these are only for financial industry, we do others for industries.

In terms of the trends in the market, the tool vendors are now getting to be a little bigger as we go along. It looks like automation is going to come in rather quickly and well. Just to give an idea, Mercury does own 60% of the market, the next player is IBM and they own only about 19%, so the jump is really large there. In terms of competition, the market is rather new and hence we haven't had too of competition yet. Most of the players are not really seriously looking at this but around just two or three offshore Indian players who are actually having testing teams and testing career paths to promote testing as a real business. So in that sense market is quite open to us and people don't seem to understand the enterprise application market in that sense.

And in our view, what does testing do for us, one it gives you a clear CXO reach. If you look at it, the most headache that CXOs get is when software goes in the market and there are defects and people are cribbing about it all the time whether it is the user whether is his CEO or CFO. Most times that is when CIOs really call in _____ basically. So testing really gets you to support him. It gives you, I was saying that if I do a testing right, I will give you 100% defect free software and that makes sure that the CIO really becomes a champion. From somebody, the person who's delaying all projects or delaying all new initiatives in the company, suddenly he becomes the hero. So it gives you very good CIO reach and we have seen that most CIOs are extremely happy if the testing happens correctly. The second thing is that it gives you a very low total cost of ownership simply because if you remove all defects, there is nothing to fix, there are no bugs to fixed in the market and so on so. So that's an extreme case, but if you look at it in from earlier data, you can see that about 60% of any software cost is in maintenance. So if is really don't have the maintenance cost, you are saving that much of money and you can actually become more productive in the market, you can become more competitive in the market because you can put in a lot more new features so on and so forth. That really is one tip of the iceberg. The other thing is that if your software process go down, you also don't need that many call center because there are no defects in the software, so not too many inquiries coming from the market and so on and so forth. So all that comes down and that is how the total cost of ownership drops down.

Finally, automation is getting bigger and we are also trying to push that rather heavily because finally testing is the end of the road activity at any test site after a new software cycle. So we have to get as much of testing done in as short a time as possible and automation is the only way to go forward. So that's the way we are planning to go ahead.

In terms of our challenges and our responses, the biggest challenge is resourcing and that is because of a couple of things. One is that testing has never really been a big activity in the market, so automatically there are not many people who know how to do testing properly. The second thing is that testing has always had that _____

people don't like it but in the _____ that has been a perception that if you don't know how to program then may be you should test kind of thing. So that has been the perception, now that has changed. That aspect has changed but unfortunately the market doesn't know it yet. So we are training a lot of people as we go forward and we also look at alternate talent proves to make sure that we have enough domain skills to pick up people from insurance companies and banks and so on so forth to ensure that we can to pick up the domain skills.

In terms of commoditization of services, actually it is very easy to term testing into commoditized service because it has always been in that way in the product world and they just ask you _____ give me three _____, I will take care of everything else. So now we have got in a lot of high value solutions and things like that where the customer sees us as somebody who can partner with them to ensure that the go to market solutions and our initiatives on the software side are really valuable. We also do a lot of go to market with tool vendors to ensure that the value of our solutions also goes up a little. And the third thing that we do is influence our community. We make it a point being a very very new community of testers to ensure that we influence it correctly, make sure that people are going in the right direction and so on. And we do a lot of things like international conferences, leaders of change forums programs and things like that. We also work with universities and colleges and have workshops make students understand that what testing is all about.

I will quickly run you through a few salient points of a case study here. It is an end-to-end system integration testing for a fortune 500 company who wanted to do a business process reengineering initiative to enable them to have a clear and efficient flow of products from suppliers to customers and also to reduce transaction costs. The total spend on this was about \$ 400 million including hardware and all that and IT cost alone was about \$ 100 million. So if you look at it is really reengineering and integration exercise and there are more than 100 plus integration points meaning that they will start that many applications and each of these applications are typically written by multiple vendors. They are not just Infosys writing the software but the customer's own IT department were writing the software, there were other vendors in the floor and everybody else was writing software. So the integration had to be flawless so that the whole thing could go on schedule. And what we did was we actually proposed a multilayered strategy for integration testing which meant that we actually tested software at different levels, at the level where it is just a module, a level where it is a larger system and an integrated system and so on and so forth. And we also did a lot of test cycle and covered optimization to make sure that we covered enough to ensure that the business critical functions were really covered 100% while the rest of the staff might have done about 60 to 70%. And finally if you look at what they had saved on direct cost of about \$350,000 dollars and an elapsed time of eight weeks, just through strategy planning. And after that through the quality of the product, we actually managed to save them another two weeks because they didn't need that much more testing anymore. So all are put together, we have given a very high-end software where their confidence level was so high that they actually threw them in the market and it started working more or less within the first few days of being there and there is no real critical bug or major bug that appeared in the market for three months after its release. Well that's my presentation. I would like to take any questions.

Participant

Arun Ramu

When you say coming into the system, there are two places where we can come at. One is that you can introduce them at requirement stage or you can stop them from going out of the market. What we do is first stop them from going out of the market and second is that if you come upfront, we would like to reduce it in the code. So what I was telling the customer is yes today we did lot of testing because the code is buggy but as you go forward, you will need less and less of us. So then it starts becoming a fixed price at that point of time. And the next step that we take them to is the fact that once you got it all straightened out, lets automate it. So instead of doing three months of testing we will do three weeks of testing. We actually tell them, yes, we will take shorter and shorter time of yours to do that but what happens with that is that they start giving us the entire global testing that they have to the central room, so that's the thing. So with the same set of people, we do a lot more testing.

Participant

How does that impact revenues?

Arun Ramu

It kind of goes up and down, but if you look at automation, we charge much more for automation than we do charge for regular manual testing. So it raises revenues in that sense. But over a period of time, the productivity goes up because there is automated testing. We also don't need that many people to do, so when we fix price, it does go up, it gives you better productivity.

Male participant

How are the profitability margins in this compared to other businesses?

Arun Ramu

It is better than average for three reasons. One is that the manual testing we try and not give it below because in new services we can actually say that we won't give it to you below the ADM rates, right. So that is one way we ensure that it is at least at the average. The second thing is that performance testing and the other one that I talked about consulting _____ to help us customers setup their own testing, we charge much higher rates than the ADM rates, so put together it is always higher average.

Male participant

What sort of profile of people you need, are they lower level than the others in Infosys?

Arun Ramu

No most of my people are engineers that we pick from and they come out exactly the same way as everybody else.

Male participant

But testing typically if you give a software engineer, it is a boring job _____?

Arun Ramu

No you will be surprised how charged up one can get once they get into the customers' business process because they are learning more and more about what the customer is doing. The other things is that in the higher end of things if you really look at it, a tester who does business process testing and knows all the IT behind that, he makes a very good IT business consultant much better than a developer would because developer knows only Java and thing like that. He does not know the business process really. So that's the more interesting part of things.

Participant

So you first get people into this plan and know them to Java now or you are going get Java people in?

Arun Ramu

I get people straight out of the engineering colleges. After three months of our training _____ Java project _____.

Participant

Arun Ramu

No they don't.

Participant

They don't, so what is their growth path, I mean?

Arun Ramu

In the same career path. It is the absolute same career path and they rise to same levels and the same salaries and everything.

Participant

So you get same higher billing rates and you won't suffer vis-à-vis the other?

Arun Ramu

Yeah, we get slightly higher billing rates than rest of the ADM folks.

Participant

Onsite-offshore mix.

Arun Ramu

25% onsite.

Okay thank you.