Krishnan

What I will do is quickly explain to you the bases behind Infosys Labs. I am sure that's part of the Infosys 3.0 vision has talked about an organizational transformation, innovation which Infosys is taking. Infosys labs also we have taken up that kind of pitch in mind and to structure ourselves to support all those different dimensions. So if you look at it focus on service innovation, which looks at the optimization and then a lot of research on enterprise technologies and another aspect around building tomorrows enterprise, those are research areas from our lab which are fully focused on new growth engines which impact the transformation and innovation pieces. That's point number 1. While doing this, we also want to do this differently, which means making it an IP enabled or an intellectual property enabled. So in order to do that, there are a number of research areas that we have broken down in Infosys labs. I don't think today we have the time to get on each one of these process but we have two important focus, one is from a technology research perspective which is really looking at how we can use these emerging technologies to impact businesses or organizations and the software engineering service as innovations research which is about how we differentiate our own services. Given these 2 perspectives, So if we take the 4 areas, the first one will talk about mobility itself these two are enterprise technology space and these 2 are Infosys applications, data masking and services innovations space. So we look at a flavor of four things, and we will take it forward.

First thing let's start with mobility. I will tell you what is the primary problems that we are focusing on. The problem statement or rather the opportunity statement is that we strongly believe that whatever internet builds to the way enterprises work today, that internet is becoming, which is smart mobile internet, mobile will do the same thing for enterprises. Now we all as consumers have been amazed by the overall mobility but now when it comes to enterprises, the extent to which they have leveraged mobile computing devices to business on the go still is at a very early stage and that has to do with fundamental constraints. Fundamental constraint means people while they take technologically complex to bring the enterprises process on the tablet from mobile phones, or all the different kind of interest that are there. They are worried about security etc. So we have attempted , we have been researching for the last 5 – 6 years, as I said in the morning intellectual property is very critical, we have a portfolio of over 55-60 patents and 45 to. 30 of them have already amended in our flagship platforms that is mConnect and today we have reached a level where we can commercially deliver a promise of taking any of your enterprise and asset delivering it on mobility without you bothering about it that's fundamental to what we have done. And from a technology innovation perspective, the lead that we are taking is with a vision which is about making computing smart intelligence. In a traditional desktop of the world , it has all been about somebody has developed and application and once the application has been developed for the entire life cycle of the applications, it keeps repeating whatever programmer has asked the application to do. We using our platform, our way building applications which constantly change their behavior, based on who is using what device they are using, where they are using, what context we are using. So enabled with this powerful platform today any function in Infosys which we are giving as a services to our client is able to provide not just mobility for really sophisticated advanced mobility, to our clients every team without having to bother about recruiting to mobility experts, creating all that technologies site etc. The speed at which we are taking all the assets that we heard today and making them mobile enabled has become phenomenal. We today have these platform embedded in more than 30 clients of our where they are trying to set the mobility foundation for them, rather than saying this is your one application is mobile enabled, we are taking our technology platforms in creating a foundation there. So that hopefully their entire journey into mobility right from the early days today to the mobile internet of tomorrow, they will partner with us and we will be able to leverage this opportunity and mobility to them.

One thing if you look at Infy on the go, almost 16 – 17 Infosys critical business process are fully available in your pocket and that we take to clients, secondly skill set becoming increasingly big

challenge for an IT industry. All these mobile platforms are becoming very sophisticated. With platforms such as these we are legally possible for people with relatively lower skill sets, people who know just enough computing to possibly build a website and do some modifications today and create a sophisticated mobile and tablet experience etc. So the process is that in which we can help the transition of an organization from the internet in the mobility era, is something that is critical. I will show you one instance of mobility and also show you other instance of using mobility from the health care perspective. One of the important things that more than 2 million deaths of children below the age of 5 takes place on a yearly basis in India and if you look at the data, nearly 60 - 70% of these deaths are actually avoidable. If we can address just 5 diseases like that diarrhea and so on, within our information being made available to the people. So what we have developed is sort of a mobile enabled knowledge system for what is called the Asha worker's, we accredited social health activist, and we created another solution, we take demonstration of how we have leveraged the power of the mobile, so we have codified some of the knowledge being used based on the WHO regulation as our government of India on to this mobile phone. And for the Asha worker, she is interacting with me with the villagers will actually make use of this decision support system to guide her in a way that problem can be solved.

Let us look at an example how our decision support system will help an Asha worker. Currently the application supports 2 languages, English and Hindi. Other languages can be implemented as and when required. We select the patient type a child, we enter the patients ID, for demo purpose we are selecting diarrhea as the disease. What comes now is a list of questions. The question that follow are, how many days the patient is suffering from diarrhea. We enter the number of days. The next question that follows up is, is the blood in stool ,the answer you can ask the mother of the child for this question. The next question is the patient lethargic or unconscious. Is patient restless or irritable? Is patient's eye sunken? Likewise the whole questionnaire can be filled. The treatment of people that follow are can be conveyed to the mother of the child and the mother can be advised to return immediately. Likewise the whole patient data can be uploaded to a central server. In case the child's condition is attached as severe the Asha worker can make a call to a doctor. The doctor can login to the server which means details of patient and provides online prescription. Asha worker can then download prescription and provide it to the patients. The patient data can be retrieved for various analytical purposes by way the government agencies as well as other organizations that were interested.

Speaker

I just wanted to share that in the morning some of my colleagues may have talked to you about social edged platform and so on. Some of the intellectual property that we are working in Infosys lab is flowing in to the platform. So that way in which the research outputs are getting in to the platforms.

Speaker

Now for both application developments and application maintenance which is roughly 38% of our revenues, we have platforms which covers the end to end spectrum of work that we do is called application development and application maintenance and the whole thing is about differentiation. So obviously the first question is, is differentiation possible? I mean you may wonder because this is a mature service for so many years. Application development has been just around for a while. Is differentiation really possible? And in application development at least it is clear that there is value to be provided is because realizing the business promise or time to market etc are clear value preposition that clients may see but about maintenance, maintenance is sometimes considered lights on, it is considered sunk cost, that kind of stuff. So is it really possible to differentiate maintenance? So I am going to take that as an example and you got a demo on what

the Infosys application maintenance platform is and how we are differentiating backward value we give to our clients in the application maintenance space. So if you look at maintenance, the premise and the basic crust of the differentiation problem is this, the cost of the problem is greater, much greater than the cost of solving the problem. And what we are trying to say is the kind of application that we maintained, the large mission critical application and if there is an outage, if there is a breakdown, the loss of reputation, the loss of business, the overall loss to the client is far greater than the cost of solving the problem may be one hour of effort or 5 hours of effort of solving the problem. So that is where the core differentiation problem arises in maintenance. That is where the potential for differentiation lies in maintenance. So when we dig deeper and embrace this problem down it essentially results in 3 value propositions for the client. One is if you can be preventive, if you can optimize the application landscape in such a way that you avoid problems from happening. You are able to predict problems before they happen. You know where the problems are likely to happen and you fit that or optimize that before it actually happens. Then client see value in that. The second thing is once you have identified the problem, solving a problem is easy but getting it completely right is not that easy. Lot of problems recur. Lot of problems give collateral damage. So you fix one problem but it opens up somewhere else. So getting it first time right is very important. And the way you do that is it basically allows you to differentiate and clients value that. The third thing is it comes down to, once you know the problem, you know the solution. How can you do it efficiently, do it the same way whether it is a 10 year old employee, meaning it is a guy worth 10 year of experience or a guy worth 2 year of experience, how you bring that same level of performance and productivity in to the picture. So that is what the value proposition to the client is. Therefore out platform is standing on these 4 legs. Which is an automation, knowledge driven , optimization and end to end work flow and the linkages are pretty obvious, the preventive is all about optimization, how you optimize the stuff and make sure that you are able to predict and make sure that you solve the problem before it actually happens. Getting it first time right is really about knowledge driven, having a 10 year old experience guy. All these knowledge residing in your repository so that even a 2 year old guy can perform as good as a 10 year guy and as good as multiple 10 year old guys in the system. So one 10 year old guy may know one part of the application. Because these applications are very large remember. So it is tough for a person to know the entire application well. He is just 2 year in to system, the application has taken 100 of person years to develop. So unless that knowledge resides in a repository which he can access and leverage, it is very difficult for him to get it first time right and automation also results in productivity because efficiency and end to end work flow is how to make that predictable and institutionalized.

Speaker

As said maintenance is all about people having a knowledge about the system, people being able to do the work, people who pulled mundane workout of their work, pull out the system, machine will do it right first time, machine will do it accurately every time, and then as we keep working on the system, delta keeps going in to the system. I worked for one work request, what is a work request? Something has failed Fix it, that is one simple work which comes to me, I work on that, what is that I do, goes in to the system. Some change on the compliance side, some applications have to change to make a system comply. . So that is another work request that I take. I make the changes, I save the changes I have done, test it, everything goes in to the system, as data keeps going into the system the knowledge is building to the system, it is available to me because it is all digitized. It comes back to me when I am working on similar problem next time but at the same time since everything is getting digitized, lot of data is getting generated in to the system, which I can mine it later on, understand and what the knowledge that I created, how can I leverage it to optimize the client system, so some example of that. while working on the clients application, I can understand the application characteristics that how far they are selling, what are the problems with that, what is the functional health of that, what is the business health of that, and so on and so forth. And once that data is getting generated, I can take this data and go back to the client to say

how you can optimize this system. This system or application are not so good, they are not adding value to you. The business value of this is low. Here in the business application which is very critical, important for businesses, but look at functional edge, it doesn't have any agility , it doesn't have any modern technology in it. When changes come it takes much longer to make the changes to the system. So I collect this data in multiple dimensions and presenting back to the clients saying that here it is how we have to optimize the system. So here I am adding value by understanding who is better by going by a particular plan, how we can change the system, looking at this multiple dimension. So this is how the optimization. when we take out the application, from the client, 100 applications, 200 application portfolios, we also have started and understand the repository of applications, what these applications are doing, what is the technical, and what is the business and based on that when I come up with my roadmap as how can I serve my customer better on a day to day basis. We have platform that we have developed for our people on the ground call it simply as "I- AM", Infosys application management platform.

Sanjay Purohit

What is important was to give a view that when Infosys Labs were investing in to research and development on one end, it is driving an intellectual asset into product platform but on the other hand, there is a lot of innovation investment that goes into our application development, maintenance, testing, go on, it's an important part again in the end it is the core engine which is running needs to differentiate itself and keep ahead of time. These 2 fundamental, there is third which is looking at building tomorrows enterprise and technology for the future but this is a very important facet of the overall strategy.