LES AMIS DE
l'École de Paris

http://www.ecole.org

Technological Resources and Innovation seminar

Organised thanks to the patronage of the following companies :
Air France
Algoé[2]
ANRT
Arcelor
Areva[2]
Cabinet Regimbeau[1]
Caisse des Dépôts et Consignations
CEA
Chaire "management de l'innovation" de l'École polytechnique
Chambre de Commerce et d'Industrie de Paris
CNRS
Conseil Supérieur de l'Ordre des Experts Comptables
Danone
Deloitte
École des mines de Paris
EDF
Entreprise & Personnel
Fondation Charles Léopold Mayer pour le Progrès de l'Homme
France Télécom
FVA Management
Roger Godino
Groupe ESSEC
HRA Pharma
IDRH
IdVectoR[1]
Institut de l'Entreprise
La Poste
Lafarge
Ministère de l'Industrie, direction générale des Entreprises
PSA Peugeot Citroën
Reims Management School
Renault
Royal Canin
Saint-Gobain
Schneider Electric Industrie
SNCF[1]
Thales
Total
Unilog
Ylios

[1] For the "Technological resources and innovation" seminar
[2] For the "Business life" seminar

(liste at May 1, 2007)

DEVELOPING INFORMATION TECHNOLOGY SERVICES IN INDIA

by

Gilles TALDU
Member, executive committee and Group Delivery Manager
Capgemini

November 15th, 2006
Report by Élisabeth Bourguinat
Translation by Rachel Marlin

Overview

Information Technology (IT) service companies such as Capgemini went through a difficult patch after the Internet bubble burst and prices subsequently collapsed. Gilles Taldu was recruited by Capgemini because of his industrial experience in improving productivity and production relocation. He implemented a strategy based on two principles : 'distributed delivery' (distributing production between front and back office sites), and 'rightshore' (finding the optimal location for production teams in order to meet client needs). Capgemini subsidiaries have been established in various countries, but it is the Indian subsidiary which is the leader in this development, with a year-on-year increase of 80 % in employee numbers over the past three years. Today, the Capgemini management intends to change this so that the Indian employees are no longer regarded simply as subcontractors, but can take full advantage of the potential synergies between the Indian and Western teams.

TALK : Gilles TALDU

Having worked for Thomson for more than ten years, I was recruited by Capgemini three years ago for the newly created position of Industrial Director on the executive committee. This was an innovative approach for an IT service company.

As manager of one of the branches of Thomson, I had started a method of improving production by using processes rather than by cost reduction, which is the norm in the electronics world. I had also taken part in a major production relocation programme. I was recruited by Capgemini in 2003 in order to apply a similar approach. The group's management was convinced that the IT world had to adapt to the strong pressure on prices caused by the bursting of the Internet bubble between 2001 and 2002.

Capgemini

Capgemini's turnover is approximately 7 billion Euros, 80 % of which is generated in Europe and 20 % in the United States. The group employs about 60,000 people.

Capgemini offers its clients four business approaches traditionally used in the IT service industry. The first is technical assistance by sending IT staff on site to enable clients to carry out IT services themselves. Secondly, consultancy services to enable management to help with strategic questions or to enable IT departments to discuss more technical questions. Thirdly, taking full management and delivery of end to end projects such as renewing the IT equipment for a bank's dealing room or an electronic reservation system for an airline company. Finally, outsourcing which consists of managing a client's IT service including transferring the various materials and the staff if the client so desires.

At the end of the 1990s, the IT service sector expanded rapidly with the development of management systems such as SAP, the technical changes due to the Millenuim, and the Internet boom which started a strong demand for services. When the bubble burst, the economy went through a difficult patch, and the first reaction of companies was to reduce costs, especially those for IT services. The number of orders fell dramatically and led to a price collapse of about 30 %.

Facing such difficulties and knowing that the wages bill represents two-thirds of the costs of an IT service company, management decided to launch an industrialisation programme very similar to that which industrial companies had done several decades earlier. I was in charge of implementing this change and I immediately launched two joint initiatives ; encouraging greater efficiency by improving the process, and relocating production. These two approaches are also known as 'distributed delivery' (in other words, satisfactory production shared out between different locations), and 'rightshore' (which consists of putting the correct resources in the right place in order to supply our clients with the services they need).

Distributed delivery

Distributed delivery is a very simple idea, but it is very difficult to put into practice because it disrupts normal work methods. Traditionally, an IT project manager is in charge of a team and when a problem arises, he can call the appropriate person into his office in a matter of minutes. Today, some members of his team are thousands of miles away, they do not speak the same language, they are in a different time zone, and they come from very different cultures.

Distributed delivery operates between two teams ; the front office and the back office. The front office team is located near the client and takes care of client relations as well the overall programme management. The back office team is located in a production centre whose size and distance from the client are variable. It produces sub-contracted lines of code with regards the first team.

The back office team may be located in an offshore or nearshore centre. Our offshore centres are situated in India, China and Poland and number a thousand people or more. They allow us to take advantage of low labour costs and also, because of their size, allow us to benefit from economies of scale. Our nearshore centres are situated in France, Spain and Canada (for our US services). These are medium-sized centres and offer some reduction in labour costs. Their main advantage lies in the fact that they are specialised in a certain technology or savoir-faire, which results in huge productivity simply because of the concentration of talent. For example, we have a SAP centre in Toulouse, an application maintenance centre in Clermont-Ferrand, and a specialised financial centre in Nantes.

Sharing out tasks

The various tasks to be carried out during the project are distributed between the front and back office.

In the industrial world, standard products are supplied the production of which may be relocated to the other side of the world at any time. The same is not true of the service industry. In order to offer clients made-to-measure quality services, one always has to have a very high-performance team which speaks the same language and shares the same culture. The first phase of service provision is therefore determined by the Western team which discusses the project with the client and determines the specifications. The team then designs the organisation of the IT project including the key requirements, the way in which they intercommunicate, the location of the servers, and so on.

The next stage is the implementation of the project. During this time, the project manager interacts daily with the client on technical and business aspects. IT projects are known to change constantly, either because certain specifications have been forgotton or because the consequences or certain actions have not been anticipated.

The development of lines of code is determined by the back office team, which is either nearshore for very specialised tasks, or offshore for more general tasks.

The test phase which makes or breaks the project is carried out by the front office team. When one works on security or invoicing projects, these test phases are critical and may take up to 30 % of the total duration of the project. The same team is in charge of the final project acceptance.

Rightshore

Rightshore consists of finding the best location for each phase of the project. Each client has his own hopes and constraints which require appropriate solutions. Some clients want to reduce costs and in this case, using Indian centres is highly recommended. Others give great importance to liasing with people who speak the same language or being able to meet them in a 24-hour roundtrip. In this case, it is preferable to use a nearshore centre even though the costs are higher.

Our wish to satisfy clients, by locating our resources in the right places, encouraged us to increase our staff numbers enormously in our offshore centres, particularly in India. The number of Indian Capgemini employees increased from 1,000 to 6,000 between 2004 and 2006, an annual increase of 80 %. There are other increases, but on a smaller scale, in China (200 employees in 2004 and 500 in 2006) and Poland (350 in 2004 and 1,200 in 2006).

There has been a more moderate increase in the number of nearshore centre employees : in Canada, staff numbers have increased from 1,450 to 1,500 ; in Spain, from 150 to 300 ; and in France, 300 to 450. These changes reflect the demands of certain clients who adopt a very careful approach but they do not represent a fundamental market change.

Why India ?

The dominant role of India can be explained by three facts. Firstly, Indians speak English and are therefore able to work in any Western country : this is a striking difference in contrast to China.

Secondly, in terms of India's competitive labour costs, the ratio between the salary of an Indian computer scientist and that of a Western computer scientist is between four and five.

Lastly, and this is undoubtedly the most important reason, India has a reservoir of IT talent. I could open an IT production centre almost anywhere in the world with 100 to 200 employees, but there are very few countries in the world where I could envisage opening a centre employing one thousand people. In India, there are currently one million computer scientist engineers who work in both technical computing and business process outsourcing. The numbers are large because the educational system produces 150,000 new engineers every year. This is the result of a deliberate policy adopted by the Indian government.

With these three assets, a common language, low labour costs and a large supply of computer scientists, India clearly presents exceptional growth potential in the area of IT services which is focussed on the Western world of business.

The relevance of these aspects can be illustrated with the following anecdote. A few years ago, an entrepreneur who, like us, worked in rightshore, came to see me. He wanted to sell his company with its 200 employees to a large group. When he showed me a map of his production in the country in which he had established his business, I saw that the 200 employees were scattered over five different sites because he had chosen a country which was very competitive in terms of labour costs, but which did not have a reservoir of IT talent.

The availability of a labour force constitutes an essential difference between India and countries such as Poland, or developing countries. The comparison with Western countries speaks for itself : each year India supplies as many engineers as Europe and the United States put together. This fact alone ought to bring to the attention of our authorities the relationship between the industrial and the education policy.

Internal growth and growth by acquisiton

When I joined Capgemini in the summer of 2003, we had 500 employees in India. We exceeded the 5,000 mark during the summer of 2006. We think that by the end of 2006, there will be between 6,000 and 6,500, and that we will start 2007 with 12,000 employees, 17 % of our worldwide staff.

To achieve this, we are continuing to plan internal recruitment. We have also started making acquisitions because we think that we now possess the necessary maturity and credibility. We have already taken a majority share in the financial and accounting structure of Unilever in India (which accounts for 500 people), and we are in the process of closing the acquisition of Kanbay, an Indian/American IT service company specialising in banking and insurance which employs 1,000 people in the United States and 5,000 in India.

These latest changes have made us revise our development plan and we now predict that we will reach a total of 35,000 offshore employees by 2010, distributed between India, China, Poland and a few other locations.

The means of achieving success

When management instigated this rightshore policy, it resulted in an organisational and cultural revolution within the company and there was considerable resistance. Management had to use all its weight to carry through this change : as a consequence, India reports directly to the executive committee.

The American experience

Today, Capgemini is not only the leading European IT service company in terms of turnover, but also the number one offshore. One of the keys to our success is our presence in the United States, even though it only represents 20 % of our turnover. It was in the United States that the outsourcing movement began. This movement is a good reflection of Anglo-Saxon logic, and today has taken on the status of a pure commodity in the United States. Offshore spread to Europe, starting in the United Kingdom, moving on to the Netherlands and the Northern European countries, before appearing in Germany and France. Because of our presence in the United States, we were able to become familiar with offshore at least two to three years earlier than most other European companies.

Indian staff familiar with European culture

Our strong presence in Europe allows us to make our Indian employees available to our European clients. Our Indian representatives are probably those most familiar with European culture. 70 to 80 % of the one million Indian computer scientist engineers work for the United States. Capgemini is the only IT company where half of the Indian employees work for European clients. In fact, our Indian engineers constantly see French, German, Dutch and Scandanivian clients and colleagues in their offices. They are therefore able to become accustomed to the features of European culture which are really very different from American culture.

Front office teams working very closely with Western clients

Another reason for our success is our strong presence in the West, with 55,000 engineers distributed between Europe and the United States. Although we have developed our offshore activities rapidly, we have no wish whatsoever to become Indian one day ; on the contrary, we are very proud of our Western base as it enables us to offer our clients a geographical, cultural and linguistic proximity which constitutes a major asset vis-à-vis our Indian rivals or those from other developing countries.

Priority given to the management of human resources

Our success can also be explained by the values which we establish with our Indian employees. Far from being treated like second-rate subcontractors, they benefit from the same treatment as any other Capgemini employee. Since most of them are engineers or have MBAs, they are destined to have illustrious careers in the company and 10 % of them are working with Capgemini in the West. The head of our American subsidiary and a member of the executive committee is an Indian.

It is impossible to succeed in India without making the management of human resources a top priority. The market for IT services is soaring and the rates of employee turnover can be very high. When we started out in India, we only had a few hundred employees but our staff turnover rate was 35 %. It is impossible to provide quality IT services when a third of one's staff leaves every year. Today, we have reduced this rate in India to the same as that in Europe.

Targeted acquisitions

We have targeted our acquisitions carefully. It was out of the question to make large, 'blind' acquisitions which would have led to great difficulties in terms of integration. We chose companies which have activities which are complementary to our own and we have made the choice not to attempt mergers. Kanbay, for example, is a company specialising in finance and can therefore 'stand alone' from us.

The art of working together

The success or failure of teams working together on a project relies on the way in which they communicate. All our technical training now emphasises the ways of working in a transcultural environment, and we also emphasise geographical mobility.

Industrialisation

Distributed delivery enabled us to strengthen the industrialisation of processes and this guarantees greater efficiency. It is impossible for us to ask our 6,000 Indian employees to work with 100 different tools in order to adapt themselves to the requirements of 100 different Western project managers. We have devised a distributed delivery framework which regroups a collection of methods and tools in a standardised informational and collaborative way.

Assessment

In the past three years, we have made people in the company become aware of the size of the expected change. Today, each Capgemini employee understands the strategic characteristics of rightshore, and tries to make sure that it works correctly.

Of course, there was a great deal of resistance and the early stages were difficult. Between 2003 and 2004, an offshore project generally ended as a loss-maker because we were in the learning phase and even the rudiments did not work. We were completely changing our teams' frames of reference. Today, this phase is behind us. Rightshore projects have the same performance as other projects and have even helped to improve the rigour and efficiency throughout the company. Team efforts of discipline and standardisation have greatly raised the level of company performance so that now it is in a very positive competitive position in relation to other groups which were not able or which did not want to change over to the rightshore way of production.

Today, we have built very efficient offshore centres in India and Poland which have reached a critical size, and are competitive and function very satisfactorily.

Future perspectives

We have new ambitions for the coming years. We want to see the number of offshore employees increase to 35,000 in 2010, but we also want to change the model which limits Indian centres as subcontractors to Western centres. The current model does not allow us to offer our Indian colleagues a level of satisfaction which they justifiably aspire to on a professional level. Neither does it allow us to benefit from all the potential synergies between our different teams.

Therefore, we hope to move towards a more integrated model. The aim is to evolve from a location which is attractive in terms of labour costs to a location which corresponds to a technical content : in this way, our Indian centres will become centres of excellence for certain technologies or trades. The acquisition of Kanbay is a prime example of this strategy.

DISCUSSION

How can one manage complex situations from a distance ?

Question : *Recently, I read a thesis based on a study carried out within a large company about the failure of the implementation of an ERP (Enterprise Resource Planning) project. You mention the change in the specifications during a project, but this is a euphemism. It all starts with a letter to Father Christmas, but soon one discovers that some tools do not work, that some data do not exist and that there are computer bugs everywhere. Projects are complicated enough when they are geographically close : how do you manage to deal with them when they are carried out by teams a number of time zones away ? Is distance supposed to reduce conflicts ? Perhaps you only entrust relatively ' peaceful' tasks to offshore centres…*

Gilles Taldu : Quite the opposite. The more important and difficult a project is, the more likely it will be handled offshore because of its higher cost. Using a distant centre for a small project employing five or six people would make no economic sense. And offshore for complex projects works. At the present time, Indian projects have the same performance rate as the Western projects. This success is partly due to the standardised tools which we have imposed both by constraint and by using strong incentives. For example, the cost of crucial tools to ensure good co-operation with the Indian teams is paid for by the group, and not by the teams. This is the case, for example, of the Niku Clarity tool which enables us to establish joint schedules and to have a clear and shared vision of 'who does what'. A detailed study showed us that it was the best tool on the market. At the beginning of 2005, only 1,000 employees used it. We made it compulsory, and eighteen months later 10,000 employees use it. Today, teams use it exclusively, except in exceptional circumstances when the client prefers to use another software package.

We have also stepped up our technical and cultural training techniques, and finally, we have revised our methods. The old quality methods took the form of thick manuals which took up shelf space in the quality director's office. No-one ever read them or applied them, but they could be taken off the shelves whenever an audit took place. I insisted that a one single page check list of about twenty points be drawn up for each method. This is to help the team managers make sure that they were in the right place before starting their rightshore project, just like an aeroplane pilot who tests a certain number of controls before starting the take-off procedure. Of course, the 80-20 rule applies here : this method works in 80 % of cases and 20 % of cases have to be treated differently.

European culture

Q. : *You use the expression 'European culture' as opposed to American culture, but there are considerable differences between how a Frenchman works and how a Dutchman works, as the book by Philippe d'Iribarne,* La logique de l'honneur*, explains. In the event of a difficult situation, the French argue and the Dutch get ill.*

G. T. : This expression is of course a little simplistic. Because we have great resources in India, we intend to assign teams to specific countries such as the United States, France, the United Kingdom, the Netherlands, the Scandinavian countries, and the rest of the world in 2007. These teams will be the permanent interface with their colleagues in each country and we will therefore be able to develop the close relationship we are looking for between the front and back office. If we have this degree of specialisation, it is because 50 % of our Indian staff work for Europe, whereas most of our rival companies – whether they are Indian companies or Western groups – dedicate no more than 20 % of their resources to Europe.

Q. : *Is it more difficult for Europeans than Americans to recruit computer scientists in India ?*

G. T. : Again, the fact that we are present in the United States helps us to recruit Indian computer scientists more easily than other European groups because these Indians dream about living in the United States. Having said that, this is more likely to apply to Indians who

have never worked for a Western company before. After a few years working in a company such as Capgemini where they meet English, French, Dutch people, and hear about different European countries, they become just as enthusiastic about the idea of working in European countries. The commercial director for India is still nostalgic about the herrings he used to eat when he was sent to work in Sweden…

When will salaries be equal ?

Q. : *You emphasised the company's desire in the long term to give Indian employees the same careers as your Western employees, and in particular to help avoid high employee turnover. In your opinion, when will the salary level of the Indians – which was the motivating force behind the decision to locate in India – be the same as that of the Western employees ? Assuming that in the meantime, the French have learned sufficient English, and French universities have sufficiently developed their computer scientist training programmes so that one might envisage relocating sites back in France…*

G. T. : Salaries are currently increasing by 15 % per annum in India, both because the demand for IT services is very high and because India, like many developing countries, currently has a high rate of inflation. Studies show that the Indian salaries will be the same as Western ones in about twenty years' time. This gives us time to optimise offshore costs by other means. The first factor is the percentage of work carried out in Western areas or elsewhere. With time, the IT industry will become more aggressive with offshore, and the percentrage of work carried out in India will increase resulting in increased savings even if Indian salaries continue to rise. The second factor is productivity which increases according to the size of the production site and the prospect of specialising production by technology.

The fact that India provides 150,000 to 250,000 new engineers each year also has a cost benefit because it allows one to develop teams which are much younger than those in Europe, consisting on average 50 % of seniors and 50 % of juniors (juniors have three years or less work experience ; seniors three years or more). And the younger, the cheaper. These young recruits also have the advantage of being able to integrate into the company very easily and being very conscientious they do not leave the company until they have learned their business properly.

How much of the business is accounted for by offshore ?

Q. : *You mentioned the four business areas of Capgemini. Which of these areas are concerned with offshore ?*

G. T. : Project management and outsourcing. These two areas account for 70 % of our staff.

Q. : *In terms of turnover, how much is generated by offshore* ?

G. T. : It is easier for me to discuss this in terms of numbers of employees. By the end of 2006, offshore will consist of 6,000 people out of a total of 60,000, or, more exactly, out of 40,000 since 30 % of our employees are working in business areas which are not concerned with offshore. Following the two acquisitions we are currently undertaking, offshore will account for 12,000 people out of a total of 45,000.

Professional mobility of Western engineers

Q. : *You mention the movement of Indian engineers to the West but how do you organise the movement of Western engineers to India ?*

G. T. : Rightshore is a massive movement and being able to take part in this 'adventure' is extremely attractive for our Western engineers. In fact, I am not able to place all those who want to move overseas. In view of our management methods, we do not need to send a huge number of Western engineers to India : there needs to be just enough people to ensure the technical link between the front and back office teams and to iron out the intercultural

difficulties. When a French project manager works for the first time with Indian staff, he generally makes a few mistakes despite the cultural training he has received. The French expert, who is permanently in India, can help him to put things right by saying *« You did not manage it correctly. When the person you talked to said that, it meant this. »*

Standardising production ?

Q. : *The standardised methods you mention make me think about Lego. I cannot see any simularities with my IT experience. On the contrary, I have observed that numerous mergers are tragedies due to the IT, because the systems are incompatible, and because one gives different names to the same things and similar names to different things.*

G. T. : Standardisation concerns methods and tools and in particular the way in which people communicate and work together. However, each IT project is unique. Each line of code is the result of a specification which was established for a given client. In certain cases, for example SAP which is relatively standard, we can increase our productivity by re-using certain lines of code which already exist. This is one of the challenges awaiting the IT industry in the coming years. Like all other industrial areas, the IT industry will gain considerably in productivity : a programmer who currently produces 1,000 lines of code per day ought to produce 1,200 tomorrow. One of the ways to reach this figure will be to identify the standard bricks which can be inserted into a made-to-measure service.

Q. : *Are you not afraid that this progressive industrialisation will destroy your business and that the striking growth in the numbers of your staff will come up against the emergence of standard products which will greatly reduce your market ?*

G. T. : Standardisation is inevitable but our services will be strongly related to a particular sector. For example, in order to change completely the IT systems of banks or insurance companies, one has to be able to understand the intricate internal workings of their business processes which are very different to those of a car manufacturer, for example. Moreover, reducing the costs of IT services linked to productivity gains which we are going to experience and will share with our clients, will most certainly lead to a boom in the market. Tomorrow, companies will be able to implement IT services which they cannot afford today because of the cost.

Why China and Poland ?

Q. : *As India seems to be a good location, why have you also established centres in China and Poland ?*

G. T. : It is a good strategy never to put all one's eggs in one basket, and we have to meet the different needs of our clients. Poland, for example, has certain advantages compared to India. Not only is it close to Western Europe geographically, which is reassuring to some of our clients for ease of business and security reasons, but Poles are often multilingual. In Poland it is very easy to find computer scientists who speak English and also German, French or even Italian, and this is an important advantage for services which require important linguistic communication. This is particularly the case for process outsourcing which has developed a great deal in financial and administrative areas. One day, I was present in our Krakow centre when there was a heated discussion between one of our Polish employees (who spoke excellent French) and the supplier of one of our clients who was cross because his invoices had not been paid. It was quite clear that he had no idea at all that he was talking to a Polish woman sitting in Krakow !

For the time being, China does not have much of a presence in the IT services market. There are three reasons to explain this : firstly, unlike the Indians, the Chinese do not usually speak English. Secondly, China has not invested as much as India in the training of its computer scientists, and thirdly, Chinese IT resources are taken up by the growth of their own home market. 90 % of Indian computer scientists work in export, whereas 90 % of Chinese computer scientists work for the home market. For the time being, our Chinese centres aim to

serve our Asian clients but it is clear that in the next few years China will become a leading IT player quite simply because of its size.

Alternative models ?

Q. : *Do your rivals follow the same path as you, or are there alternative models ?*

G. T. : There are currently three models : the 'Western centric' model for Western groups which are looking to set up an offshore back office ; the 'Indian centric' model for Indian groups which are trying to set up a Western front office ; and the groups which refuse to change and which keep their current method of working either because they are not sufficiently strong to change or because they do not dare confront internal resistance.These groups run the risk of facing serious problems of competition rapidly. As far as our Indian rivals are concerned, I think they will find it much more difficult to create close relationships with their Western clients than the difficulty which we will experience in creating back office centres in India.

Q. : *One day, the 10 % of Indian computer scientists whom you employ in Europe will return to their own country, having learned about Western clients, knowledge which currently they do not have.*

G. T. : There is no doubt that the race has begun and that there will be winners and losers. However, I still think that it is easier to construct factories than to construct relationships with clients. In addition, the real battle will not focus so much on competition in terms of costs, but more on the ability of each side to offer its clients innovation and competence in the IT sector.

Presentation of the speaker :

Gilles Taldu : a high-ranked engineer from the prestigious *Corps des mines*, the greatest technical corps of the French state. He ended his adminstrative career as industrial adviser in the cabinets of the ministry of Industry, the ministry of Finance and the Prime Minister. He created Thomson Broadcast Systems, the television images main system manufacturer, and joined the Thomson executive committee as director of the B-to-B (Business to Business) branch to take part in the economic recovery and privatisation of the company which was valued at one Franc. He joined the Capgemini executive committee in 2003 in order to launch the industrialisation of a company of IT services by taking the risk of successfully establishing centres in India.

Translation by Rachel Marlin (rachelm@tiscali.fr)