

MANAGEMENT CASE

describes a real-life situation faced, a decision or action taken by an individual manager or by an organization at the strategic, functional or operational levels

Infosys Technologies Ltd.: Growing Share of a Customer's Business

James A Narus and DVR Seshadri

"In summary, we encourage Infosys to compete for the customization, installation, and maintenance of a JAVA-based Ariba® e-procurement system here at Prairie Four Square (PFS) Insurance," stated the Chief Information Officer (CIO), PFS, Robert Peters. "As part of this project, you would work not only with our information technology (IT) group on internal system tasks but also with our Purchasing Department to select and certify vendors, standardize all product codes and order processing procedures, and integrate certified vendors' billing processes with our accounts payable systems. Be aware that you will be competing head-to-head with two leading IT consulting firms; so, you will have to demonstrate that you can handle all aspects of the project in a superior manner. Furthermore, given our CEO's drive to cut costs significantly, I urge you to 'sharpen your pencils' before you quote a price on the project. Let's schedule your project proposal presentation for three weeks from today."

Thus concluded a one-hour briefing that the CIO, Peters, and his colleague, the PFS Purchasing Vice President, Kay Bryan, had given to the Infosys Engagement Manager, Rahul Dev, and the Account Manager, Jaspal Singh. During that briefing, Peters and Bryan had outlined plans to move all company acquisitions of products and services online and provided operational details on how they would like to see the system function. As Rahul and Jaspal walked down the main corridor of PFS' Dallas headquarters building and towards the street, they nodded to each other in delight over the unexpected opportunity that had just presented itself. "Although Infosys has successfully increased the number of major IT projects it conducts for PFS to 65, we have only managed to capture around US \$ 30 million (i.e., Rs. 1.38 billion Indian rupees) in annual business out of their annual IT total spend of \$1 billion (Rs. 46 billion) even though we could ideally handle up to 45 per cent of that total spend. Moreover, most of the projects that we have undertaken have been low value-added, price-sensitive business. This project requires an end-to-end solution. If we win it and deliver a high quality solution, we will be in an advantageous position to gain a greater share of their more profitable, high value-added business. We must put together a convincing case for employing Infosys," Rahul insisted.

COMPANY BACKGROUND

With an annual sales of over Rs. 139 billion (\$2979 million) and net profits exceeding

KEY WORDS

Infosys Business Model

Insurance

Ariba e-Procurement System

Account Management Team

Offshore Outsourcing

Rs. 24 billion (\$844 million) for the year ending March 31, 2007, Infosys Technologies Ltd. provides a full range of IT and consulting services including the development, customization, reengineering, and maintenance of personal and network computing, mainframe, and Internet-based information systems. Based in Bangalore, India, Infosys employs over 72,000 people (Infosysians in company parlance) worldwide, sustains 16 development centres (spread over 8 cities) in India and 9 global development centres (spread across USA, Canada, UK, and Japan), and operates 41 marketing offices across the globe. Its sprawling *Infosys City* campus in Bangalore includes modern office buildings, state-of-the-art computer facilities, training classrooms, a gymnasium and sauna, a golf course, a tennis court, and a power generation system. The firm also maintains a business continuity and disaster recovery facility on the island of Mauritius.

Often referred to as the 'Microsoft of India,' Infosys had a humble beginning in July, 1981. Reportedly, Chairman Narayana Murthy and six entrepreneurial friends borrowed \$250 from their wives to form the company (see Exhibit 1). While doing so, they made a profound statement—"Wealth could be created ethically and honestly." Furthermore, they wanted to build an organization where advancement was based on merit. At that point of time, their vision was seen as nothing short of revolutionary in that India was not seen as the home of high-tech industries; state-run rather than privately held enterprises were the norm; corruption was commonplace in Indian business dealings; and people often got ahead because of who they knew or were related to rather than what they were capable of accomplishing.

Over the years, the seven founders followed their principles not only making Infosys one of the most admired companies in India but also gaining almost legendary status in the community. Although they are multimillionaires, the founders have lived modest lives. For example, they are routinely seen taking public transit, participating in local events, and taking their children to public schools. Furthermore, they have devoted time and effort to improving social welfare in India and have contributed considerable funds to charities.

During the 1980s, several factors converged to make Infosys wildly successful. The Indian government decided to target IT as the source of significant economic development. To spur such development, the government eliminated significant 'red tape' associated with

new business formation, offered free or low-cost access to infrastructure (e.g., buildings and data transmission lines), and granted frequent 'tax holidays.' Simultaneously, General Electric (GE) made global outsourcing respectable and allayed fears about potential risks by moving significant business to Indian subcontractors. Other major international corporations quickly followed suit. To tap the large pool of competent and IT-savvy professionals in India, Infosys issued lucrative stock option plans for all employees. Soon, the most talented programmers and managers from across India were queuing up for a chance to work for Infosys.

The firm has experienced four phases in its development, each entailing a distinct market offering and value proposition. In its first decade, Infosys relied on an offshore outsourcing model. Playing the 'global labour arbitrage' game, Infosys benefited from the availability of low-cost and world-class IT professionals in India. As a rule of thumb, the salary of a software engineer in India could be 40 per cent to 50 per cent lower than a comparable individual in the US or Europe. This resource cost advantage enabled Infosys to bid on and win lucrative contracts for labour-intensive, low value-added 'back-office' work such as data entry, transaction processing and analysis, and customer billing and accounts payable monitoring. In the early 1990s, the Infosys business model opportunistically evolved to focus on maintenance contracts for legacy systems. Much of this work entailed preventative and corrective software programming in the anticipation of year two thousand (Y2K) anomalies. Although these projects allowed Infosys to gain a reputation for its programming capabilities, the work was not seen as glamorous and ground-breaking by those associated with emerging technologies and systems such as the Internet.

Beginning in the late 1990s, Infosys redirected its priorities away from selling discrete maintenance projects and toward the marketing of end-to-end solutions and in particular those involving consultative services such as design, customization, business process reengineering, and installation. By doing so, Infosys executives believed that they could better create and share customer value. To begin with, internal research has found that over 60 per cent of the IT costs are locked-in during the period from design to installation. Managers have also come to realize that involvement during the initial stages of the life cycle of a system acquaints Infosys personnel with software logic, architecture, and codes. This saves

significant costs over engaging a client during the maintenance phase in that Infosys personnel do not have to spend days if not weeks gaining a clear understanding of how the system is meant to work. From a revenue and profit standpoint, Infosys managers have also discovered that although the design-related phases only account for 20 per cent of the potential revenues from an account, they drive the remaining 80 per cent of the future revenues from that account. Lastly, and perhaps most importantly, selling end-to-end solutions enables Infosys to grow by gaining greater share of a customer's business. This is an essential pathway to growth for Infosys in that over 80 per cent of its revenues come from the existing and loyal customers.

In recent years, the Infosys business model has evolved again, this time emphasizing greater focus on the specific industries. This metamorphosis can be attributed to the increasing diversity of the IT system requirements and the different rates of IT spending growth across industries. Rather than pursuing all potential clients with uniform market offerings, Infosys now seeks business domain excellence. This entails offering highly customized end-to-end solutions to a limited number of potentially high-profit market segments that have 'mission critical' IT applications. Among the targeted industries are insurance, health care, and retailing.

PRAIRIE FOUR SQUARE INSURANCE

Prairie Four Square (PFS) Insurance is one of the leading providers of individual life, group life, medical and dental, and long-term care and disability insurance in the US. In 1982, Stephen Neely founded PFS in Dallas, TX, to serve the overlooked ranchers, farmers, and shopkeepers in North Texas. As a symbol for his fledgling company, Neely selected the Prairie Four Square — a modest though resilient housing design—that was common in Texas at that time. This style of home is seen as the representative of the South West and the government has designated many of these homes that have survived from the mid-1880s as national historic landmarks. Neely believed that PFS captured the spirit of his enterprise: "To provide reasonably priced, reliable, long-term shelter, and security for families." An etching of a well-known PFS from the Dallas area serves as the logo of the company and appears on all of its stationery, brochures, and advertising.

Neely and his partners quickly established a repu-

tation throughout the South West for offering fair prices, personalized and friendly service, and prompt and equitable resolution of all claims. In particular, ordinary ranchers and farmers believed that in times of crisis, PFS and its representatives were among the best friends you could have on your side. As a result, PFS grew to become one of the largest insurance companies in the South West and later in the Mid West. A series of acquisitions and mergers during the late 1900s expanded the PFS reach to the East and West Coasts. Today, the PFS sales exceed \$27 billion (Rs. 1.2 trillion). It serves over 50 million individual, institutional, and corporate customers in the US.

PFS maintains extensive and mission critical IT systems across the US. As an insurance company, it must process, analyse, and act upon tremendous amounts of diverse data on an ongoing basis. These data include: actuarial tables, billings, claim requests and payments, customer profiles and addresses, government rules and regulations, healthcare provider identification, investments, treatment, and payment codes, and vendor information. To handle this data, PFS relies on an amalgam of IT technologies — mainframes for batch processing, office computers for online analyses, and network systems that utilized the Internet and several private extranets. To protect proprietary information, PFS policy had long required that most of this work be done internally. Although PFS occasionally relied on the services of the top IT consulting firms to complete the short-term and focused strategic projects, an overwhelming majority of its IT work has been done in-house. As a consequence, the firm's IT infrastructure, staffing, and costs ballooned during the 1980s and 1990s.

Relentless pressure from the Wall Street to cut costs dramatically and the highly publicized successes of GE, prompted the PFS senior management to outsource offshore portions of its IT maintenance activities. Five years ago, they had selected Infosys as the sole supplier in an outsourcing pilot test, awarding it three maintenance contracts. Pleased with Infosys' performance, the PFS has outsourced more and more projects to them over the years. Today, Infosys has over 65 major contracts with PFS. And, the scope of these projects is far broader than the original three. Not only do Infosys people handle the routine maintenance tasks such as cleansing corrupted data, correcting software flaws, and running programme and systems tests, they also complete higher value maintenance-related work such as application

development, business process reengineering, installation of certain packaged solutions, programme management, and technology consulting.

Although Infosys remains the sole supplier of outsourced IT maintenance work to the PFS, its status has functioned as ‘golden handcuffs,’ limiting the type of projects PFS awards. Overall, the PFS has favoured a ‘best of breed’ approach to IT systems work awarding contracts to those firms seen as the most competent in the specific categories (e.g., knowledge management, systems architecture, maintenance). For example, when it comes to strategic and conceptual projects (e.g., IT system design, integration of IT and telecommunications systems, role of IT within the organization), senior managers have long favoured the top consulting firms — Accenture, EDS, and IBM Global Services. PFS’ rationale for the approach is twofold. First, it ensures that work goes to the one supplier most able to complete it. Second, it keeps any one vendor from gaining too much leverage over the PFS because they are the only ones who know how the entire IT system works. Clearly, the PFS senior management saw Infosys as an outstanding vendor for the ‘offshore outsourcing of IT maintenance projects.’

PFS e-Procurement System Project

The PFS senior management strongly advocated using IT wherever possible to increase the level of customer service and to lower the operating costs. Within the past few months, a company ‘white paper’ had indicated that the purchasing department was one area where IT could make significant contributions in lowering operating costs. Traditionally, purchasing had been decentralized at the PFS with each group having the authority to acquire supplies, equipment, and services as it saw fit. This resulted in a confusing array of contradictory and Byzantine purchasing practices across the firm. Each year, the company bought over 10,000 different items from some 1,200 suppliers. According to cost analysts in the ‘white paper,’ the average cost to process an order at the PFS was \$78. This far exceeded the industry average of \$45 per order. To remedy the situation, the ‘white paper’ recommended that the PFS reduce its supplier base to some 300 firms and implement an e-procurement system featuring JAVA-based Ariba software. Senior managers called upon CIO Peters and the Vice President Bryan to follow up on these recommendations.

Reviewing the situation, Peters and Bryan realized

that an overhaul of the PFS purchasing practices and procedures would be needed. “This is as much a consulting project as an IT project,” Kay Bryan said, alluding to the old Hammer and Champy adage, ‘If you automate a bad process, you end up with a faster bad process.’ We will have to address a series of critical issues before we begin to order products and services online. Among our key concerns are the following:

- How should purchasing processes and practices be standardized across all company units?
- How could purchase orders be aggregated across all company units to increase company leverage in price negotiations?
- How can PFS standardize the process of specifying requests for quotes (RFQs) and placing orders?
- How can the Ariba e-procurement system be integrated with the reengineered purchasing process?
- Which vendors should be certified for inclusion in the e-procurement system? Which criteria should be used for selection? How could the PFS integrate and synchronize its purchasing systems with order processing procedures at all of the certified vendor firms?
- Should the PFS use electronic funds transfers to pay for orders?

The strategic nature of the project led Peters and Bryan to initially conclude that the PFS would need to call on the services of a top IT consulting firm. Contacting the leading consulting firms about the project, Peters and Bryan observed that none of them seemed to possess strong capabilities and competencies in all aspects required for an end-to-end e-procurement solution. Normally, that finding would have reinforced the PFS’ best-of-breed approach to vendor selection. However, given the required integration both within the PFS internal groups and across outside suppliers, Peters and Bryan believed that a pilot project where one firm received the entire contract was in order. If the pilot proved to be successful, PFS might award more sole sourcing end-to-end IT projects in the future.

In short order, Peters and Bryan had narrowed candidates down to two prospective vendors — Excalibur and Merrimac Consulting. Excalibur Consulting, based in Chicago, and Merrimac Consulting, based in Fairfax County, Virginia, are among the top 15 consulting firms in the world. Pundits agree that they are the leading operations consulting firms, particularly when it comes to applying IT to issues such as enterprise requirement

planning (ERP), process engineering, logistics, and purchasing. In general, both consultancies prefer to work on the 'grand strategy' and highly conceptual 'big picture' projects. Historically, their weakness has been in the area of ongoing IT systems maintenance. As most of their people are based in the US, their labour rates have been non-competitive. Moreover, they had a tendency to avoid low value and low profit projects such as maintenance and therefore did not have requisite expertise. "As I understand it," Peters opined, "Both firms have just opened large facilities in the Bangalore area. My guess is that they are doing so to get a piece of the 'offshore IT-system maintenance outsourcing business.' To date, PFS has not employed either firm for any large-scale or long-term IT projects. If we ask them for a proposal on the e-procurement system project, I wonder if they would submit a low-ball price quote on an end-to-end solution in order to get a foot in the door of our maintenance work."

"Perhaps we should ask Infosys to prepare a proposal on this project as well," Peters stated. "Five years ago, they were an unknown commodity to us and we gave them a chance. Over these years, their work has exceeded our expectations both in terms of quality and costs. More importantly, they may have a big advantage over Excalibur and Merrimac – Infosys' maintenance work has exposed their people to all aspects of our IT system as well as how we do business. As a result, they will be farther down the 'learning curve' at the beginning of the project. That might translate into better work more quickly which will yield significant cost savings for PFS. I have also read recently in the Wall Street Journal and The Financial Times of London, that Infosys has been hiring well-seasoned people from the top consulting firms as well as from the top MBA programmes worldwide. Also, they appear to be bolstering their consulting resources and in-house training. My guess is that they are trying to secure higher value added and profit business." The two agreed to ask Infosys to submit a proposal for the project.

"This should be an interesting acquisitions exercise," Kay Bryan reflected. "Excalibur and Merrimac have an outstanding reputation for operations consulting. They will have to demonstrate that they can deliver the maintenance portion of an end-to-end solution. Infosys, on the other hand, clearly does outstanding maintenance work. They will have to show that they can handle the strategic and conceptual consulting

portion of the project. I wonder which of these firms will provide the most compelling case that they can 'stretch' their competencies and capabilities to deliver an end-to-end solution that meets our requirements?"

Demonstrating and Documenting Capabilities¹

On the way back to Infosys offices, Rahul and Jaspal brainstormed ideas for their presentation to PFS while relating their career experiences. It was a typical hot summer day in Dallas. Rahul, a second generation American from the Bay Area in California, was somewhat fatigued and dehydrated from the weeklong 95°F plus (35°C) temperature. Although he routinely attended the Indian association meetings to maintain his cultural identity, and had travelled to India many times, Rahul dressed, spoke, and acted like a typical Californian. He had received his B.S. in Computer Science from the University of California, Berkeley and his MBA with a major concentration in Finance from the Stanford University. Following graduation, Rahul worked for Excalibur Consulting in Chicago for 10 years. Five years ago, he joined Infosys, working initially out of the Boston office. While he had not yet adjusted to the Dallas weather, he welcomed his new location because it afforded him the opportunity to closely follow his favourite pastime, Dallas Mavericks basketball.

Jaspal, a Sikh from Patiala, India, was clearly in his element, even though he sported a turban, jacket and a tie, on such a hot day. "I find the heat invigorating," Jaspal told Rahul, "It makes me want to take on tough projects." Jaspal too had had an interesting set of career experiences. He had received his B.E. in Electronics and Communications Engineering from the University of Punjab. An entrepreneur at heart, Jaspal started and operated a successful value-added reseller (VAR) business in Mumbai for seven years. Three years ago, opportunities to sell his business at a profit and join Infosys presented themselves simultaneously and he took advantage of them. After several months of training, Jaspal accepted an international assignment in Dallas. This was his first experience of living outside of India and he worked hard to adjust to his new environment. Fortunately, Jaspal's new wife and the small Sikh community in Dallas made him feel at home and encouraged him while enabling him to practice his religion and customs. On bright, Sunday mornings, Jaspal was found

¹ Infosys manager names, titles, and backgrounds described here have been disguised for proprietary reasons.

playing cricket with some of his Indian, Australian, and British colleagues in a park near his house in Dallas.

“In order to prepare a compelling case for Infosys, we are going to have to assemble all available performance metrics and case histories of our ongoing work at PFS,” Rahul reasoned. “In contrast to competing firms, we have an advantage — the Infosys personnel diligently and rigorously gather, document, and analyse such data on an ongoing basis. As I see it, we will need to do the following during our presentation. First, we will have to demonstrate to the PFS managers that Infosys performance has exceeded their expectations. We can do this by documenting not only quality of our efforts but also the added value that Infosys has delivered. Second, we will have to provide evidence that Infosys can handle all aspects of an end-to-end solution, and in particular, those that fall outside of our traditional IT system maintenance activities. Third, we are going to have to present logical arguments that convince the PFS managers that the entire e-procurement system project should go to a single vendor. Let us gather up the information we have at our disposal here in Dallas. Then, I would like to schedule a teleconference call with our PFS team members in Bangalore. Working together, I am confident that we can put together a winning case for Infosys.”

The PFS Account Team

As Infosys thrives on highly collaborative relationships with loyal customer firms; its sales and marketing efforts, not surprisingly, are organized around strategic accounts. An Engagement Manager, whose office is located in close proximity to the customer’s headquarters, is responsible for all Infosys personnel and resources, both in India and the client’s country, that serve a given customer firm. Assisting him or her in the client’s country is an Account Manager who coordinates ‘front office tasks’ such as routine face-to-face client contact, onsite technical support, contract negotiations, project fulfillment, and trouble-shooting, among many others. A staff of technical engineers and business consultants support both the Engagement Manager and the Account Manager in the client’s country. For example, some 150 Infosys assist Rahul and Jaspal in serving PFS in the US. Back in Bangalore, a Delivery Manager supervises all ‘back office operations’ such as data processing and analysis, research and analysis, programming concerns, and in-depth technical assistance, among many others. The Delivery Manager, in turn, draws upon a Senior

Programmer. This person is responsible for all technical aspects related to client IT systems. These four individuals — Engagement Manager, Account Manager, Delivery Manager, and Senior Programmer — constitute the core of each strategic account team.

Lalitha Krishnan is the Delivery Manager for PFS. Lalitha did her graduation in Computer Sciences from the Indian Institute of Technology, Kanpur and her MBA from the Indian Institute of Management, Bangalore. For over 15 years, she worked on IT system projects for Tata Consultancy Services. During that period, she travelled extensively in Asia, Europe, and the US completing a wide variety of software implementation projects. Married to the Vice President of Marketing, Hindustan Levers Ltd., Lalitha is the mother of two young children. She has worked for Infosys for 10 years.

As the Delivery Manager, Lalitha is responsible for over 500 programmers and technical people in Bangalore who are assigned to the PFS account. In addition, she is almost in daily contact not only with her counterparts Infosys in Dallas, but also with the PFS IT managers. Lalitha has long maintained that she must always live in two cultures. A quick scan of her office in Bangalore reveals the clash of cultures. A devout Hindu, Lalitha has a framed illustration of Lord Balaji and a photograph of her family on one side of her desk. Occasionally, during the day, she takes time to meditate and pray, seeking enlightenment and peace of mind. And, on the other side of her desk, she has taped the red, white, and blue bumper sticker, “Don’t Mess with Texas.” On one of the walls of her office, Lalitha proudly displays a large poster of Dallas Cowboys — the American football team. To help her relate to her counterparts at PFS, Infosys constantly streams the local news headlines from Dallas across her office computer. Before she starts work each morning, Lalitha also makes it a point to check up on the local Dallas events on DallasObserver.com. Lastly, to better communicate with the PFS managers and to better understand the American culture, Lalitha has taken several courses at the Infosys Learning and Development (LnD) Centre.

Ravikiran Gowda, a Senior Programmer, is Lalitha’s top assistant. In his late 20s, Ravi has his B.E. and M.S. in Mechanical Engineering from Ramaiah College of Engineering in Bangalore. Ravi is a prototypical ‘computer nerd.’ He claims to always have within his reach, every state-of-the-art electronic device known to man including a mobile phone, a personal digital assistant,

a tablet computer, a multifunction electronic watch, among many others. Ravi immerses himself perpetually in computer codes, not only the current client software but also the latest releases from the major software vendors. When he is not working on projects, Ravi often appears to be enraptured by an endless parade of video games.

Teleconference Call²

At 6:00 a.m. (6.00 hours) the next morning, Rahul initiated a hastily arranged teleconference call with Jaspal in Dallas, and Lalitha and Ravi in Bangalore. They started so early because Bangalore is 11 hours ahead of Dallas. So, for Lalitha and Ravi, it was 5:00 p.m. (17.00 hours). The colleagues saw nothing unusual in this. In fact, the dedicated Infoscons routinely put in long hours, extending the day both in the morning and evening to accommodate their counterparts on the other side of the globe.

Following pleasantries and a review of the PFS business, they turned their attention to the prospective, Ariba e-Procurement System project. Each took a turn offering arguments that would enable Rahul and Jaspal to demonstrate and document the case for awarding the project to Infosys.

Team support. Rahul opened the discussions announcing that Infosys senior management would assist the PFS account management team by assigning a number of support personnel to the project. Among these individuals would include a Programme Manager, three business analysts, a technical specialist on Ariba programming, a product specialist familiar with e-procurement software, a development analyst, and a technical analyst. In addition, the Enterprise Solutions Group would contribute a team skilled in executing the company's award winning 'Package Implementation Methodology.' This would ensure that the Ariba e-procurement software is up and running in a flawless manner in short order. Lastly, a technical specialist from Ariba would assist during the sales presentation and implementation phases of the project. However, Rahul sagely pointed out that Ariba personnel would likely support the competition in a similar manner.

Overall quality of Infosys work. Lalitha carefully summarized the Infosys performance over the past five years on its portfolio of PFS maintenance projects. "As you can see from the chart in my last e-mail message, we

² While the performance and cost data presented here are representative, they have been disguised for proprietary reasons.

evaluate our work on three dimensions – quality, timeliness, and reliability (Exhibit 2). There are two metrics for each dimension. Each metric is an average across all projects. We provide these to PFS managers online in the form of what we call a 'CIO Dashboard.' During each of the past five years, Infosys has exceeded the PFS targets by a wide margin," Lalitha concluded.

Reengineering project assignments. "One of our accomplishments at the PFS that I am particularly proud of relates to how we redesigned five major maintenance projects," Jaspal commented. "Beginning in year two of our engagement at PFS, Infosys took charge of those projects. In the past years, PFS had employed 250 people to complete them. Each of those employees was assigned exclusively to one project. Once we learned the nature of project tasks, we began to move some of them to Bangalore. In year three of our engagement at the PFS, we had 75 people working on the projects in the US and 250 in India. At this point, we began to scrutinize the manner in which these tasks were completed and to question whether the tasks could in fact be completed at the same quality levels using fewer people. We reengineered the processes for each project and assigned the remaining employees across several projects. Thus, in years four and five of our engagement at PFS, we have used 75 Infoscons in the US and 100 in Bangalore to complete the redesigned tasks. The surplus 150 Infoscons in Bangalore were transferred to other PFS projects at 'no extra charge' to PFS. Given that the costs of a full-time equivalent (FTE)³ are \$8,000 per month (Rs. 368,000) in the US and \$3,200 per month (Rs. 147,200) in India, the resource reductions represent a significant benefit for PFS. Perhaps more importantly, it demonstrates that at Infosys, in contrast to many of our Indian and Chinese competitors, improving employee productivity rather than just gaining labour savings from moving people offshore, is our key goal and value proposition! And, I can back up this claim by demonstrating that reengineering project processes and employee tasks are the key competencies of the Infosys human resources department."

³ A full-time equivalent (FTE) represents the number of hours a full-time employee would be expected to work during a given period of time. It measures the total amount of employee time required for a project taking into account that some employees work on several projects at once. The costs of an FTE estimate direct labor and other overhead charges required to support the work. Please note that all FTEs presented in this case have been disguised for proprietary reasons.

Data corruption prevention subroutine. "PFS runs two major IT systems off a common database," Rahul pointed out. "One uses a mainframe computer to run millions of routine data processing tasks in 'batch fashion' from 11.00 p.m. (2300 hours) to 5.00 a.m. (500 hours). The second entails some 125 networked, personal computers (PCs) that the PFS employees use to complete a variety of tasks from 5:00 a.m. to 11.00 p.m. Prior to Infosys' work at PFS, batch programmes occasionally ran later than 5:00 a.m. When this happened, it would corrupt the data being used from the central database and shutdown the online system, idling 125 PFS workers for at least four hours. To remedy the problem, Infosys wrote a subroutine that automatically shut down all batch programmes at 5:00 a.m."

"What cost savings did our efforts deliver to PFS? To begin with, we reduced the average number of corruption incidents per year from 24 to 0. Each time a corruption event occurred in the past, three programmers would spend an average of four hours apiece at an FTE rate of \$45 (Rs. 2,070) per hour reconstituting the data. These programmers would be assisted by a technical support person for one hour at an FTE rate of \$40 (Rs. 1,840) per hour. At PFS, 125 employees would be idled for four hours at an FTE rate of \$42 (Rs. 1,932) per hour. Running programmes to reconstitute the corrupted data would take about 15 seconds at a central processing unit (CPU) at a time rate of \$ 0.39 (Rs. 18.0) per second. More importantly, we demonstrated to PFS early on in the engagement that Infosys had the ability to diagnose problems and write subroutines to correct them," Rahul asserted.

Record comparison algorithm. "Along similar lines, I had an opportunity to write a critical algorithm for the PFS last year that improved the record comparison processing efficiency by 56 per cent and the processing time by eight hours," Ravi added. "On the last day of each month, PFS is required to complete a series of 'compliance' analyses on all of its customer accounts and report their findings to the Insurance Commissions of each state within which they operate. The analyses match the type of insurance plan to fees charged as well as compare actual payments to customers versus plan stipulations. If they fail to deliver the reports to each state commission by the first day of each new month, the states penalize PFS on an average by \$360,000 (Rs. 16.5 million). My contacts at PFS tell me that there is about a 1 per cent probability that they will not complete

and submit the required reports on time each month."

"Coincidentally, I ran across a new algorithm that addressed this very problem in a computer science journal. I was able to write a programme around this algorithm for the PFS. With an additional nine hours in hand, the PFS eliminated the likelihood that they would not meet their deadlines. In the process, Infosys saved PFS eight hours of CPU time each month. With the additional CPU time, they are able to complete another 1,800 jobs the last night of each month. Although I assume that these 1,800 jobs are value-adding in the sense that they either reduce company costs or increase revenues, I cannot attribute specific monetary amounts."

Reduction in disability claims reserves. "Two years ago, we helped to reduce the cash reserves that PFS must have on hand at all times to pay disability claims by \$14 million (Rs. 645 million)," Jaspal noted. "We accomplished this by streamlining and reengineering not only the claims submission process but also the claims payment process. As part of this redesign, we moved what had traditionally been a manual process online. With a more efficient process, PFS completed the related tasks faster and more accurately. In accordance with insurance regulations, PFS was allowed to reduce its cash reserves. At a cost of capital at around 10 per cent, PFS achieved significant savings. I think that this is a simple but persuasive anecdote in that it demonstrates that Infosys can effectively reengineer the payment processes. Obviously, this skill will be essential in the case of an e-procurement system."

Benefits of sole sourcing. "PFS will reap significant benefits from sole sourcing the project to Infosys," Rahul insisted. "Most importantly, by being involved from day one in the project, Infosys will be able to forgo the 'knowledge transfer time' required to bring programmers up-to-speed on technical details of the system had they entered at the maintenance stage. By our best estimates, it would take five programmers around 12 weeks to master an Ariba e-procurement system that another vendor had installed and customized. As those programmers would be based in Dallas, their FTE costs would be \$8,000 per month (Rs. 368,000). When we enter the maintenance phase, Infosys would accrue additional savings in that we would be in a far better position to quickly track down the source of any software problems. Of course, at this time it would be impossible to predict what those problems might be and to assess a monetary cost savings to their resolution."

Ongoing Ariba e-procurement projects. “According to my colleagues here in Bangalore,” Lalitha interjected, “Infosys has initiated three end-to-end Ariba e-procurement system projects within the year. Two of them are for the retailers and one for a healthcare organization. One retailer and the healthcare organization are located in the US while the other retailer is in Europe. So, we do have some limited experience with such work. Although it is too early to assess the outcomes of those projects, we do know that things have gone well so far. And, in the case of the healthcare organization, we have already been able to save them \$100,000 (Rs. 4,600,000) per year by switching the company’s ‘change order’ procedures (i.e., the alteration of a previously processed order) from a manual to an online software-based system. However, I fully expect that PFS will question whether our experience in retail and healthcare is applicable to the insurance industry. At the same time, our two competitors will undoubtedly tout their many online procurement system design and implementation projects and pronounce that purchasing-related consulting falls within the ‘sweet spot’ of their core competencies and capabilities.”

Vendor management team visit. “Serendipitously,” Lalitha continued, “the PFS President, Laura Ewing, and a vendor management team will be visiting Infosys in Bangalore next week. The vendor management team is comprised of middle level IT and purchasing managers who deal with us on a regular basis. I wonder if we can use their visit to demonstrate that Infosys has the capability to deliver an end-to-end solution on the Ariba e-procurement system project. We plan to provide all team members associated with the PFS project five weeks of JAVA training here in Bangalore. Therefore, we could take our PFS visitors over to the Infosys Education and Research (E&R) Group and have them sit in on several JAVA training sessions as well as demonstrations of JAVA projects that we have successfully completed in the past. While they are visiting the E&R block, we might also go over the consulting portion of our employee training programmes and introduce them to some of our new hires who come to Infosys with considerable consulting experience.”


At the conclusion of the teleconference call, the four PFS account team members agreed that they had made significant progress and agreed to search for additional documented cost savings that Rahul and Jaspal could use in their presentation.

PREPARING FOR THE PRESENTATION

In the next few days after the teleconference call, Rahul and Jaspal worked together with their cost analysts to put together a proposal plus price quote for the PFS. To meet Infosys profit requirements, they determined that the cost-plus price of the implementation phase of the project — purchasing process redesign, vendor selection and training, package customizations, integration with PFS enterprise requirement planning (ERP) system, installation, and “burn-in” — should be \$2 million (Rs. 92 million). As for the maintenance portion of the end-to-end solution, the team estimated a price of \$400,000 (Rs. 18.4 million) per year.⁴ “As all of this work will have to be done in Dallas,” Rahul stated, “my guess is that our costs will be similar to those of the two IT consulting firms competing for the business. As they have not done any major projects for the PFS in recent years and are interested in demonstrating their newly developed system maintenance capabilities, our competitors may choose to price significantly below cost. I wonder if we should take an aggressive stance and cut our price significantly below our normal cost-plus fee.”

With a little less than two weeks to go, Rahul and Jaspal continued to piece together a highly persuasive presentation. “We need to win this business and deliver a high quality solution as it will open the door to other highly lucrative projects at PFS,” Rahul reiterated. “For example, I understand that PFS plans to implement in the near future new ERP, customer relationship management (CRM), and financial analysis systems. We most certainly would want a piece of that action.”

ISSUES FOR DISCUSSION

1. Looking beyond the immediate Ariba e-procurement system project, what challenging issues related to global marketing does this case pose for Infosys?
2. What quantifiable cost savings not specified in project contracts has Infosys delivered to PFS during the past five years?
3. What “knowledge transfer time” cost savings can PFS expect from sole sourcing the Ariba e-procurement System project?
4. How can Infosys’ PFS Account Team persuasively sell the firm’s ability to deliver a superior end-to-end solution for the Ariba e-procurement system project? 

⁴ These prices have been disguised for proprietary reasons. They do not represent the actual prices that Infosys managers quoted on this project.

Exhibit 1: The Seven Founders of Infosys and Their Current Positions

Mr. NR Narayana Murthy – Chairman of the Board and Chief Mentor
Mr. Nandan M Nilekani – Managing Director and Chief Executive Officer
Mr. S Gopalakrishnan – President, Chief Operating Officer and Member of the Board
Mr. K Dinesh – Co-founder and Member of the Board of Infosys Technologies Limited
Mr. SD Shibulal – Group Head – Worldwide Sales and Customer Delivery
Mr. NS Raghavan – Retired
Mr. Ashok Arora – Left the company in 1989.

Exhibit 2: Average Performance Metrics on Maintenance Projects over Past Five Years

Performance Dimension	PFS Target	Infosys Results
Quality		
• Requests delivered with zero defects (%)	90.0	97.1
• Delivered defects per 1,000 person hours	4.9	3.2
Timeliness		
• Requests delivered on time (%)	91.0	99.6
• Effort estimation accuracy (%)	83.0	98.1
Reliability		
• Uptime on Infosys maintained systems (%)	94.0	99.9
• Abend* ratio across Infosys maintained systems (%)	1.8	0.2

*Abend is an abnormal ending of a programme.

James A Narus is a Professor at the Babcock Graduate School of Management, Wake Forest University in Charlotte, North Carolina. His teaching, research, and consulting interests include value-based marketing, use of adaptive channels, management of market offerings, and partnership between firms in business markets. His teaching portfolio includes such courses as marketing channel management, strategic account management, sales management, marketing strategy and policy, brand management, and advertising management. Over the years, he has also taught in executive development programmes at Northwestern University, the Pennsylvania State University, Texas A&M University, and Twente University (The Netherlands). Narus has published numerous articles and research papers on business market management in *Harvard Business Review*, *Sloan Management Review*, *California Management Review*, and *Journal of Marketing*, among other journals. He is the co-author of a seminal book, *Business Market Management: Understanding, Creating and Delivering Value*.
e-mail: jim.narus@mbawfu.edu

DVR Seshadri teaches extensively in the various long-term programmes at the Indian Institute of Management Bangalore, as well as in various executive education programmes for companies. He is also adjunct faculty at IIM Ahmedabad where he teaches Strategy, B2B Marketing, and Corporate Entrepreneurship. He has had over 15 years of industrial experience before joining academics in 2000. He has developed a number of case studies and papers in his areas of interest, viz., B2B marketing, strategy and corporate entrepreneurship. He has authored over a dozen articles in refereed journals, developed over 70 case studies in his areas of interest, and recently co-authored a book, *Innovation Management* with Prof. Shlomo Maital of Technion Institute of Management, Haifa, Israel, published by Sage (India).
e-mail: dvrs@IIMB.ERNET.in

It is not the language of painters but the language of nature which one should listen to. . . . The feeling for the things themselves, for reality, is more important than the feeling for pictures.

— Vincent Van Gogh