
Sourcing of IT-Services to Offshore Destinations

[Strategy, Methodologies, Destinations]



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I. Table of Contents

I.INTRODUCTION.....	1
II.THE DRIVING FORCES BEHIND OFFSHORING.....	3
A.Strategic vs. non-strategic activities in firms.....	3
B.The trend towards outsourcing.....	3
B.1.Global competition heats up.....	3
B.2.Reengineering of the organization.....	4
B.3.New technology trends.....	5
B.4.Emergence of modern telecommunications networks in emerging countries.....	5
C.Impact of offshoring on national economies.....	5
D.Future directions.....	6
III.SERVICES SUITABLE FOR OFF- AND NEARSHORING.....	7
A.Assessment of services to be outsourced.....	7
A.1.Typical on-shore functions.....	7
A.2.Typical nearshore and offshore functions.....	7
A.3.Examples.....	8
A.4.Selective versus total outsourcing.....	8
A.5.Single vs. multi-sourcing.....	9
IV. BUILDING AN OFFSHORE RELATIONSHIP.....	11
A.Model 1: Facilitator.....	11
B.Model 2: Co-operation.....	11
C.Model 3: Workbench.....	11
D.Model 4: Engineering - One Shot.....	12
E.Model 5: Classical Outsourcing.....	12
F.Feasibility analysis, screening of ideas.....	12
F.1.Choosing a management team.....	12
F.2.Informing employees	13
F.3.Feasibility analysis and screening of ideas.....	13
F.4.Methodology for screening which functions to outsource.....	14
F.5.Evaluation and selection of suppliers.....	17
G.Contracting issues and procedures.....	18
H.Corporate relationship with the supplier.....	21
H.1.Alliances, partnerships, and joint ventures.....	22

H.2.Vertical integration.....	23
H.3.Merger and acquisition.....	23
H.4.Outsourcing with the offshore supplier.....	24
V.MANAGING AN OFFSHORE RELATIONSHIP.....	25
A.Security of intellectual property.....	25
B.Integration of supplier processes and operations.....	25
C.Handling disputes.....	26
D.Managing the risks.....	26
D.1.Mentality and cultural gap.....	26
D.2.Communications differences.....	26
D.3.Transition.....	26
E.Relationship management team.....	26
F.Information flow and documentation.....	27
G.Change control.....	27
H.Meetings, reviews, and audits.....	27
I.Anticipating contract termination and renewal.....	27
VI.OFFSHORING PITFALLS AND TO-DO'S - PRIMER.....	29
A.Success factors	29
B.Failure factors.....	34
VII.COUNTRY COMPARISON.....	37
A.Assessment of offshore and nearshore destinations.....	39
B.Ranking of offshore/nearshore detinations, and their specialities.....	39
C.East and Central Europe.....	41
D.The Russian Federation	44
D.1.History & background.....	44
D.2.The IT industry.....	44
D.3.IT services for offshoring.....	46
E.Central Europe: Poland, Czech Republic, Slovakia, Hungary and Turkey.....	46
F.China.....	46
F.1.IT software & services for export.....	48
G. India.....	50
G.1.History and background.....	51
i.Phase.....	52
ii.Phase.....	52
iii.Phase.....	53

G.2. Some factors behind India's IT industry growth.....	53
G.3. IT industry size and location.....	54
G.4. The major Indian companies and their strengths.....	55
G.5. The IT-enabled services/BPO segment.....	57
H. Ireland.....	58
H.1. Initial industrialization of the "Emerald Isle"	58
H.2. Chip, software and ITES companies enter.....	59
H.3. IT software & services for export.....	59
I. The Philippines.....	59
VIII.3A'S IT & SOURCING ADVISORY SERVICES.....	61
A. Offshore projects and strategy.....	61
B. Software Project Management	61
C. Project Estimate based on Functional Point Analysis.....	62
D. Project Management Performance Consulting	62
E. New Practice Adoption	62
F. Process and Quality Improvement	62

I. Introduction

Outsourcing of IT services and selected back-office functions has grown steadily over the past decade, with offshore outsourcing showing accelerated growth over the past five years. Offshore outsourcing became prominent when Y2K and applications software work was palmed off to Indian companies. Since then offshore-outsourced work has expanded to include select business processes (like payroll and benefits administration), and IT-enabled services like contact centers and customer support services.

Global investment in offshore IT services touched \$10 billion in 2004 and could grow to \$17 billion by 2008, according to IDC. Most analysts view offshore outsourcing as an irreversible trend attracting more and more companies by its short- and long-term economic benefits.

While India, Ireland, and Israel have been the major beneficiaries of offshore contracts, more recently a new form of cross-border outsourcing has emerged: nearshore outsourcing, or sending work to neighboring countries, like Central or East Europe or lower cost West Europe (like Spain).

This Executive Report covers both offshore and nearshore outsourcing. After examining the forces driving global outsourcing, the report discusses critical success factors in an offshoring relationship, and the process to follow to effectively evaluate and select offshore suppliers and integrate supplier and parent operations – considering the cross-cultural factors also. On the way, models and examples involving countries from Asia and East Europe are examined. The report also examines in detail the relative advantages and disadvantages of major offshore/nearshore destinations.

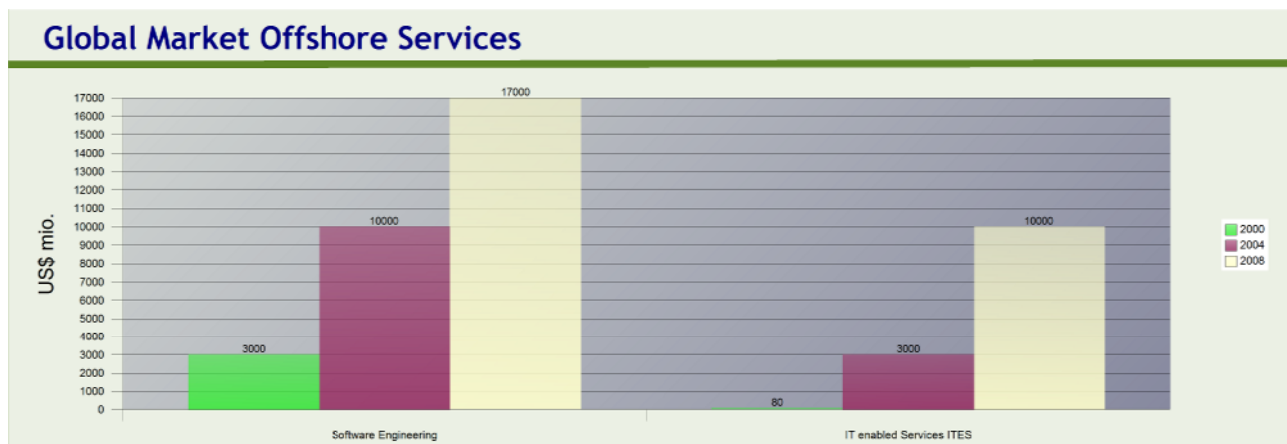


Illustration 1- Source: Bureau of Labour, US government

In the short run, cost reductions that can go as high as 30%-60% are just too attractive to ignore in today's competitive global markets. And for almost any company, the promise of staffing flexibility, access to additional skills, business agility, and reduction of fixed costs over the long term is a compelling argument.

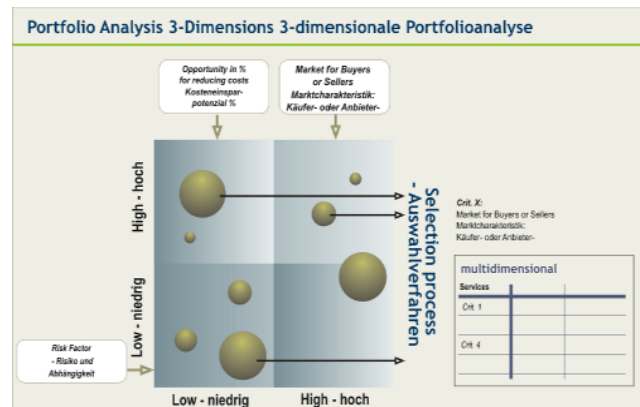
II. The Driving Forces behind Offshoring

A. Strategic vs. non-strategic activities in firms

Fundamental to the offshoring concept is the distinction between strategic and non-strategic activities of firms. Thinking on this was influenced by an insightful article in Harvard Business Review published over a decade ago by James Brian Quinn, Thomas Doorley, and Penny Paquette¹. The authors contended that management should treat an organization as a collection of services that provide value. Even in manufacturing firms, most workers are in service and support functions, such as research, logistics, maintenance, design, accounting, law, information services, and the like. Value is added in style, image, durability, after-sales maintenance, etc., just as much as in actual production of a product.

It was also argued that service companies employ the most advanced technologies and industry-standard practices, and offer their services at lower cost and often-superior quality compared to the same services offered inside a firm.

Capitalizing on this, managers must analyze the strength of the service components of their business relative to competitors. They should discover which services could give the firm an edge over competitors, concentrate on doing a world-class job in delivering these strategic services internally, and act to "eliminate, limit, or outsource" the rest.



B. The trend towards outsourcing

In parallel with these changes in thinking, a number of business forces converged to drive growth of global outsourcing, including:

- ▶ Escalation of global competition
- ▶ organizational factors
- ▶ technology factors
- ▶ emergence of modern telecom networks in emerging countries

B.1. Global competition heats up

The post-war economies of developed countries were built through mass production of standard goods, as well as backward and forward integration. Bulk of manufacturing output was consumed in internal markets: foreign markets did not influence major design, manufacturing, or marketing decisions.

This changed in the 1970s-1980s. Companies in countries that previously posed no threat entered world markets with higher-quality products, greater variety of products tuned to affluent consumer tastes, and less expensive products based on more efficient technology and cheap labor. Shoe and apparel manufacturing went to Asia; Japanese autos

threatened the European and US Markets and in the latter case almost ran other vehicles off the road. Some pundits forecast the demise of manufacturing in developed countries.

What actually happened was that managements learned completely new ways of doing business – they learned about Kanban Manufacturing - quality, product diversity, flexible manufacturing - and later on new models like JIT – just-in-time - supply, and managing supply chains or outsourcing.

The most troubled industries and large enterprises started to implement these new methodologies, prominent examples being GE with Six Sigma and General Motors with Mr. Lopez's initiatives. New co-operative relationships - alliances, partnerships, and outsourcing - grew. IT outsourcing (ITO) became dominant, and more recently business process outsourcing (BPO) began to grow faster than ITO.

High-tech industry giants like IBM outsourced manufacturing to China, but later on their managements realized that in doing so they were developing strong competitors abroad in the process – competitors which had a strong price advantage. Having learned this lesson, the MNCs realized that they should also try to conquer their future competitors' home turfs. Outsourcing provided MNC firms the chance to enter new markets and create operational bases in areas targeted for expansion².

Supply grew in parallel with demand. Over the past decade, the number and quality of onshore and off-shore suppliers offering price-competitive and high-quality services has increased significantly. Barriers to entry are lower than in the past, and technological change creates discontinuities in needs that suppliers can exploit. As new suppliers enter the marketplace, competition increases, prices continue to fall, and the quality of service increases.

Experiencing rapid growth in demand for their services, suppliers snap up some of the best technical talent, further enhancing the attractiveness of offshoring.

The outsourcing market has done well regardless of the economic cycle. Companies have been motivated to outsource in bad times to reduce IT/business process costs, and in good times to access new global markets.

B.2. Reengineering of the organization

The changes wrought after the 1970s-80s were in part organizational. Large integrated organizations were found to contain flaws. Hierarchy reduced motivation, and stifled initiative. Large organizations worked well for repetitive and predictable tasks. But repetition led to formalization, and they became slow to respond to customer needs³.

Firms now respond to change by outsourcing, forming strategic alliances, and downsizing work units. When they see the need for cost-cutting and greater management control over allocation of resources, outsourcing is a rational response. Heightened competition pushes firms to outsource tasks that are standardized; search for alliances in tasks that involve high skill and innovation; and redesign internal processes to obtain flexibility, innovation, and faster response time.

Peter Drucker wrote about the "new society of organizations," a world in which knowledge is a factor of production along with land, labor, and capital. He argued that every organization must build the management of change into its very structure, for large size is no longer a necessary advantage to an industrial firm, and neither is small size. Economies of scale no longer confer advantage in production of products; quality, flexibility, agility, and the ability to meet diverse consumer demands count for more. "Whatever advantages bigness by

itself used to confer on a business have largely been canceled by the universal availability of management and information - whatever advantages smallness by itself conferred have largely been offset by the need to think, if not to act, globally⁴.

B.3. New technology trends

There has been a growing trend towards independent, decentralized IT infrastructure, initially driven by companies like Apple, DEC, Microsoft, IBM and Xerox. The symbol of older technologies was the mainframe which enabled managers to centralize authority. A decentralized structure was introduced in a rather chaotic way by users themselves, and spread through organizations at lightning speed. Decision-making was pushed closer to the customer and to the internal workings of the organization⁵. Desktop computers networked to each other and to corporate databases by Client/Server technology became a bandwagon which many jumped on to during the late 90s. Outsourcing has thrived in this environment.

In this new environment, some IT products and services became commodities, and this fostered outsourcing. A product or service is considered a commodity when customers and clients share functionality, and when reliable, high-quality performance levels are widely available at competitive prices.

Newer technology allows separation of management, operation, and delivery of information services, which expands the choices available for outsourcing globally.

Rapid technological change makes older hardware and software obsolete. Outsourced IT and BPO provides an avenue for reducing human and equipment resources that do not fit with a company's strategic direction and for meeting latest needs with up-to-date resources at competitive rates.

Senior management is attracted to outsourcing as a means of making costs predictable and ensuring that the organization pays the "market price" for IT services. Contemporary CIOs typically have business backgrounds at least as strong as their technology background, and take a business approach rather than a pure technology view of outsourcing alternatives.

B.4. Emergence of modern telecommunications networks in emerging countries

The final spark to outsourcing was provided by the advent of global digital networks and the Internet. The Internet and related technologies lowered the cost of coordination between firms, making it easier and less costly to obtain products and services from external sources. And since 1990s digital networks have grown fast in emerging countries. These countries have been able to leapfrog into using the latest telecom technologies, because of the fall in telecom equipment costs, growth of open standard equipment and stiff competition in the global telecom equipment industry. Telecom equipment firms have also been attracted to emerging countries because of the fast-growing markets they offer.

C. Impact of offshoring on national economies

The complex impact of offshoring on national economies has generated a lot of confusion. Fearful observers view offshoring as a crisis -- resulting in jobs lost to overseas workers, declining competence of domestic workers, and so on. The hopeful see opportunities: increased domestic productivity, declining value chain costs, and expanding global markets. Outsourcing is a danger when done for the wrong reasons or if poorly negotiated and implemented. But it can be an opportunity for improved value chain effectiveness and reduced

costs if properly planned, evaluated, implemented, and managed.

D. Future directions

Vocal critics will continue their debate about the efficacy of offshoring. However, as long as offshoring provides economic benefits that outweigh the potential risks, it is rational for companies to choose an offshore solution. Offshoring is another way for European companies to innovate, reduce costs, and become more competitive in the global marketplace. The more companies innovate and reduce value chain costs, the more competitive they become and the more value is passed on to consumers.

We can expect the performance-price ratio of IT to continue its upward path, allowing suppliers to exploit economies of scale and provide offshore outsourcing deals that lower costs. The Internet should continue lowering the cost of coordination between firms. Managers will become more adept at managing client-supplier relationships; repeat contracting for products and services will become more efficient; and solutions combining onshore, nearshore, and offshore delivery will be the norm for most global companies.

Value chain support services will continue to become commodity-like, making most of them prime candidates for outsourcing to reduce costs and improve efficiency.

For these reasons, offshore ITO and BPO will continue well into the foreseeable future. Offshoring will grow as a percentage of outsourcing arrangements, as pressures to reduce costs and compete globally continue unabated. There is nothing visible on the horizon to suggest that these trends will change anytime soon, certainly not in this decade.

We can anticipate that global competition will increase even more in the years ahead. The nations of Europe, Asia and Latin America will continue to provide competitive challenges and opportunities in the global market. And as cost pressures increase, companies will intensify their search for outsourcing, offshoring, and other ways to make the value chain more efficient.

Managing change will become a critical managerial skill. The challenge for management would be to consistently communicate the new strategy, secure the commitment and cooperation of managers and employees, and manage the transformation. It would have to lead people through the change efforts, and simultaneously concentrate on improving organizational competencies, and building relationships that bring value to the company.

We should expect government leaders to confront the job loss problem head on. IT workers fear that they will follow the beaten path of factory workers to the unemployment line or lower wage work. Moreover, these IT workers are without organized representation in the workplace. Business and government leaders must take an active interest in this problem.

The short term impact of many lost jobs for well-educated workers is a problem too serious to ignore. Business and political leaders in developed countries should put pressure on government and motivate the private sector to provide programs that assist displaced technology workers and help them find new opportunities. Displacement of IT workers may emerge as one of the most explosive issues of our time.

III. Services suitable for Off- and Nearshoring

A. Assessment of services to be outsourced

A look at the traditional value chain reveals a number of processes which may be suitable for outsourcing.

While moving outward from on-site in the organization to nearshore and offshore outside the organization, a number of factors change: while client interface and communication becomes less direct, and physical proximity moves farther from the client, the potential savings improve as services are moved to lower-cost nearshore and offshore labor markets⁶.

Besides, there are many activities that must be kept in-house for a firm to retain its competitive advantage and management control.

A combination of offshore, nearshore, and on-site/on-shore delivery is therefore emerging as the dominant model for global companies. A basic rule of thumb, based on experience of offshore software projects, is that no more than 30% of the work should be done on-site to achieve the requisite savings, and no less than 10% should be done on-site to achieve the required management control. There are sector-specific exceptions, for example in a telecommunications project with well defined specifications or a migration project. Significant cost savings accrue only when more than 70% of the work is performed offshore.

A.1. Typical on-shore functions

Which functions could be performed on-site? In addition to account management, these would typically include program/project management, requirements definition, prototyping, high-level design, usability testing, acceptance testing, user training, and implementation/cutover. Besides, it is important to retain certain skills critical to the company inhouse.

Projects that require considerable end-user interaction and iteration during the lifecycle are not well suited for offshore delivery. Pilot applications with complex procedures, considerable integration requirements with other systems, and high business criticality are usually inappropriate for offshore delivery.

A.2. Typical nearshore and offshore functions

Activities performed nearshore might include quick-turnaround development, emergency fixes, interactive development, prime-time support, testing, risk diversification, and a possible alternative location to on-site for high-level design.

Functions typically performed offshore include detailed design, coding, unit testing, documentation, ongoing maintenance, and project management of offshore staff.

Since one potential pitfall of offshoring is the difficulty of face-to-face interaction and communication with business analysts and end users, projects with clearly defined requirements that can use modular and structured methodologies, and which are amenable to remote testing, are typically the best suited for offshore development.

Likewise, applications that are relatively stable enable the offshore project team to focus on the

process and methodology rather than on "firefighting."

Note that to facilitate spontaneous communications and relationship building it is advisable to locate the client and service-provider relationship managers in close proximity to one another. Overall, to achieve the targeted cost savings, a rule of thumb is to locate a maximum of 20-30% of the offshore supplier's staff on-site.

A.3.Examples

Consider a hypothetical example of a company with its main operations in Hamburg. It might outsource nearshore to Budapest some of its applications development. Nearshore outsourcing offers the advantages of easier travel without long distances and jet lag, closer physical proximity encourages more teamwork, and collaborative and concurrent work is easier when all parties work in the same time zone.

Work moved offshore to India, for instance, would likely offer the Hamburg company lower costs than would moving work to Budapest. Other advantages of sourcing to India are that work could be performed almost around the clock, work quality would likely be high, and ample skills and other resources are available.

A.4.Selective versus total outsourcing

Rather than outsourcing an entire business process such as HR or finance and accounting, selective BPO uses an outside supplier or suppliers to provide one or a few selected services or processes such as accounts payable, payroll, and benefits administration. Similarly, instead of sending the entire IT function outside, one can outsource just the help desk -- an example of selective ITO.

The principle that supports selective sourcing is the emphasis on contracting with the best supplier for a specific service. This mitigates the risk of using a single supplier for a group of services, while increasing the difficulty and cost of managing multiple suppliers⁷.

Although total outsourcing deals may make the headlines, research by Lacity and Willcocks shows that selective outsourcing of IT is the most common and most satisfying practice. With selective outsourcing, IT is viewed as a portfolio of services and resources, some of which are provided internally and some externally⁸.

Total outsourcing transfers most (defined as over 80%) of the equipment, staff, and responsibility for delivery of services to an outside supplier. Total sourcing is more complex and risky because of the scope of the endeavor and the consequences of failure. The supplier must make acceptable profit margins from improving efficiency, achieving economies of scale, replacing resources in the future at less-than-current costs, or making a combination of efficiency and effectiveness improvements. Therefore, total sourcing usually yields acceptable margins only over longer periods of time.

Other potential difficulties with total solutions include the major technological and business changes occurring after the contract is signed; it is difficult to predict the frequency and magnitude of change and set contract provisions that allow for large changes in scope. Failure can be a more costly consequence of total sourcing. If the relationship with the supplier does not succeed, there are two difficult options: repeat the entire process and negotiate a contract with another supplier, or bring the functions back inside the organization with the attendant costs and problems⁹.

Prof. Moczadlo found in a recent study in Germany, that among respondents, 85% of selective

outsourcing relationships met customer expectations, while only 29% of total relationships met expectations.

A.5. Single vs. multi-sourcing

In multi-sourcing the customer outsources to more than one supplier. Classic examples of multi-sourcing are Alcatel, British Telecom, EADS to name a few. In the automotive sector this approach is already dominant not only for the supply chain, but for distribution and customer service also. Alcatel has outsourced SCM and R&D functions to Wipro, and its SAP and ERP environment work to Infosys. Companies like Deutsche Bank, BP Exploration (BPX) and DuPont have taken a similar approach. In 1995 BPX entered into relationships with three suppliers, signing an umbrella contract under which the three suppliers were obliged to work together. DuPont signed a series of 10-year contracts worth \$4 billion with two major suppliers.

Early contracts focused almost exclusively on cost reductions. Now organizations in their second or third generation of outsourcing are seeking cost savings as well as other business objectives. If one objective is to convert value-chain support functions into lean and agile groups, contracting with one prime supplier and then contracting with a relatively small number of subcontractors accountable to the prime contractor may be the best approach rather than a situation in which the customer tries to coordinate the efforts of multiple suppliers. Complex control situations and multiple demands for management's attention rarely enhance organizational agility¹⁰.

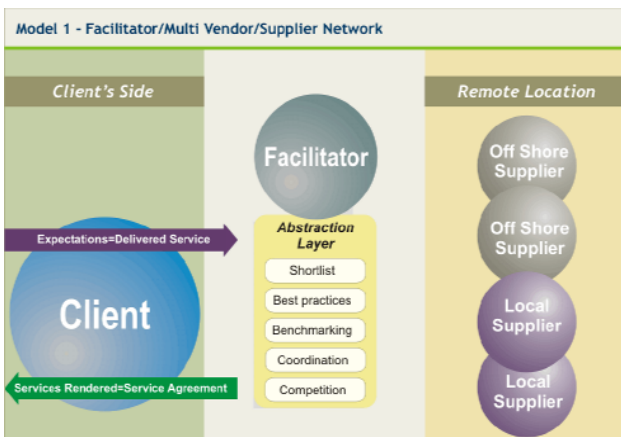
IV. Building an Offshore relationship

In offshore outsourcing highly specialized resources are utilized in projects or part-projects to ensure the medium-term competitiveness of the client company.

The required skills of the resources vary depending on the model selected. Implementation of each model brings a different result in terms of both costs and execution.

A. Model 1: Facilitator

3A or the customer's sourcing team functions as a facilitator and co-ordinates the execution and delivery of the project between the client and the supplier, in the sense of a co-operative workbench. 3A undertakes the Controlling, Quality Assurance, Delivery and if required Modification of the project. The 3A team are on-site at the client's and offshore at the supplier's facilities, thus reducing the travel and transfer costs and acting as a bridge between the different mentalities and cultures.

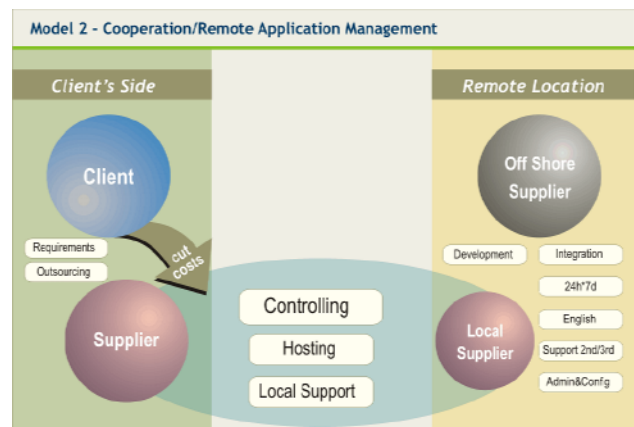


This model is extremely successful when initiating an outsourcing strategy because many of the "teething problems" can be avoided.

As a Facilitator, 3A ensures friction-free co-operation and knowledge-transfer between the client and supplier and checks that these processes actually take place.

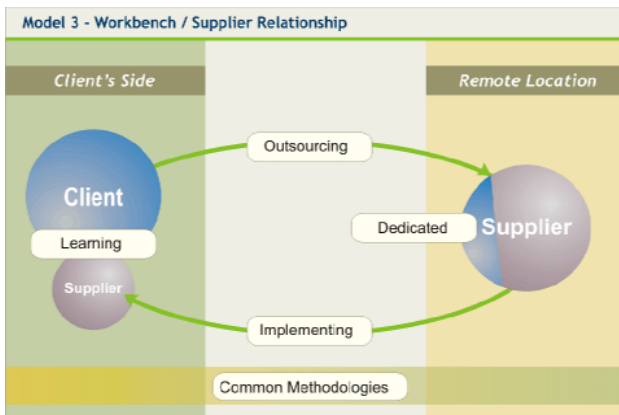
B. Model 2: Co-operation

In the sense of a Supply Chain (SCOR) with a performance through team effort and shared responsibility. The output and performance is achieved by a mixed team, both the client and the supplier are responsible for the progress and success of the project. The client can thus negotiate lower prices since the project risks are shared, and can be assured of the expected quality and performance.



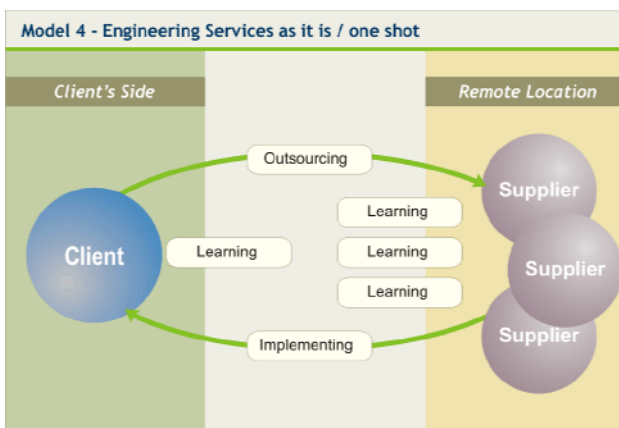
C. Model 3: Workbench

Sourcing in the sense of an extended workbench with regularly recurring projects. These are monitored more intensively by the client so that corrections and modifications to the project or product can be undertaken at any time.



D. Model 4: Engineering - One Shot

As in a building project, the blueprint or the software requirement specifications (SRS) are delivered to the supplier who develops the software precisely and in accordance with the SRS in one production process. The next order or project is given completely independent of the previous one. This model thus represents a unique engineering service.



E. Model 5: Classical Outsourcing

This involves outsourcing of IT-Infrastructure tasks like system and application management to a dedicated Network Operating Center (NOC) or System Management Center (SMC) established and monitored by the supplier. Whole areas of the IT services can be outsourced here.

A combination of the above 5 Models is often necessary.

F. Feasibility analysis, screening of ideas

F.1. Choosing a management team

Before conducting a feasibility analysis of which functions can be sent offshore, management should have complete clarity on the objectives of offshoring and what is appropriate for offshore, nearshore, and onshore delivery. They should have a grip on the offshoring evaluation, selection and management process. If the decision is made to go offshore, the probability of success is increased when senior managers place the most capable management team to oversee the relationship with the supplier; to approve or disapprove supplier technical decisions; to develop experience with outsourcing; to negotiate and enforce future outsourcing contracts; to develop the organization's technology strategy; and to keep technical strategy in alignment with corporate strategy over time.

Early in the evaluation, identify who will take leadership responsibility and make the decisions. An executive sponsor is absolutely critical. For larger outsourcing initiatives, top management must play a role. For smaller initiatives, middle-level managers might do the heavy lifting with senior management's support.

The evaluation and selection team usually needs a mix of managerial and technical talent as well as representatives from user areas where services will be directly affected by outsourcing. User perspectives and objectives are essential for setting scope and assessing risks.

The size of the evaluation and selection team depends on the scope and size of the project, but in

general, smaller teams are more effective. The team can be quite small in the planning phase and then expanded into sub-teams when analysis begins. It helps tremendously to have team members with outsourcing experience for the insight they bring to the issues and the realism they bring to cost and benefit estimates.

Managing an offshore relationship requires managers who can communicate and negotiate inward across organizational boundaries within the company and outward across organizational boundaries and national borders, rather than just issue orders downward or across. The dominant descriptors of the best offshore relationship managers are team players, strategic thinkers, negotiators, communicators, consensus builders, and analytical problem solvers. They think big picture yet focus on the details. They foster a win-win approach to issues and emphasize a "we," not a "we-they" attitude.

F.2. Informing employees

Employees should be made aware as early as possible that outsourcing is being considered. In the absence of compelling reasons not to do so, openness is preferable since secrecy is hard to maintain and can adversely impact management credibility. And once management credibility is lost, it's hard to get it back.

The atmosphere of rumor and recrimination that accompanies an outsourcing project shrouded in mystery normally fuels morale problems. Turnover problems can be reduced if employees receive timely and accurate information. Acceptance also depends on the perception that management is acting in good faith.

As talks and negotiations progress with would-be suppliers, communicate at least the broad outlines or scope of the possible offshoring arrangement.

An important part of planning for offshore outsourcing is to identify the groups of people who will be affected by offshore outsourcing and to decide what their roles will be during the transition. Planning also identifies people who should be terminated. A retention bonus is one way to keep people in the organization during the transition and longer if desired.

F.3. Feasibility analysis and screening of ideas

The feasibility of offshore outsourcing is addressed by means of screens that every offshore outsourcing idea should pass through before further, detailed evaluation. The first screen is core competency. If the function targeted for outsourcing is central to the company's profitability and competitive success, that function probably should not be outsourced.

The second screen is the cost of controlling the supplier. Suppliers are controlled through governance mechanisms that constitute a "relationship." The contract is a critical part of control and of the relationship. However, given that complete contracts that anticipate all contingencies usually can't be written, you must have a means of dealing with change other than contract terms to control the offshore supplier and ensure that the outsourced work is successfully completed¹¹.

A major challenge in analyzing the feasibility of offshoring is to estimate potential cost savings. Other screens include new technology that may pose significant challenges and risks, organizational readiness for offshore outsourcing, the availability of excellent offshore suppliers, and a sufficient quantity of outsourcing work to interest offshore suppliers.

Potential advantages using offshore suppliers

Market expansion and penetration	Expanding outside the domestic market usually requires an infrastructure. Doing business with a supplier in a foreign country targeted for market penetration normally makes it easier to compete successfully in that country's market.
Cost	Obtaining services at significantly less cost from foreign suppliers.
Business agility	Enhancing the firm's strategic flexibility; finding suppliers with the needed capabilities already in place is often cheaper and faster than hurriedly retooling internal operations.
Innovation	Improving the company's ability to innovate by interacting with "best-in-the-world" suppliers that should have considerable intellectual depth, experience with other companies, and innovative capabilities of their own.
Expertise	Gaining access to expertise faster than finding and hiring people with the skills and experience and building the internal capabilities.
Quality	Obtaining higher-quality services or components than what internal units or domestic suppliers can provide

Assessment should be made of the costs and burdens involved in developing certain capabilities internally as opposed to relying on external domestic or offshore suppliers. Creating or sustaining a capability sometimes involves a long learning process that cannot be short-circuited at an acceptable cost. Sometimes it is unclear what a company needs to do to create or sustain a needed capability (e.g., there may be multiple conflicting management opinions about the best course to follow). Sometimes companies lack the right cultures; there are divisional rivalries, uncommitted managers and workers, a shortage of necessary skills, or other organizational cultural or political barriers

that the firm cannot overcome in the short run. While acquiring a company with the needed capabilities is an option, the acquisition may come with unwanted baggage; be difficult to reverse; or pose legal, integration, and other problems.

The risks and potential disadvantages of outsourcing should be evaluated. The biggest potential disadvantage of offshore outsourcing is the risk of farming out too many or the wrong kinds of activities and, in so doing, hollowing out a company's core capabilities. Over time, the company may lose touch with the very activities and expertise that, over the long run, determine its success. The second potential pitfall is the risk of losing intellectual capital to a company in a country without adequate legal protections. Cisco is an excellent example of a company that mitigates pitfalls in both these areas. The company guards against loss of control and protects its manufacturing expertise by designing and owning the production methods used by its contract manufacturers at more than 30 worldwide production facilities and by using the Internet to monitor factory operations around the clock.

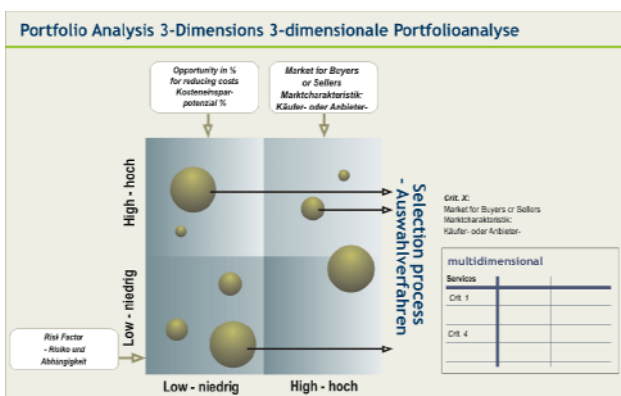
F.4. Methodology for screening which functions to outsource

It is crucial that companies properly analyse not just what are (and are not) their core differentiating processes now, but also what these will be in the future.

In five years' time, it is not impossible that global financial service institutions will retain only sufficient employees in high-cost countries to provide actual face-to-face customer interaction. The staff of dramatically thinned-out retail branches might be the sole employees for the bigger retail banks within local markets, with the vast majority of back-office processing and call-centre work moving

to global operations units. The airline industry is already facing this kind of threat from offshoring suppliers – typical examples are British Airways or Lufthansa.

This involves identifying which, if any, business functions and processes are contributing least to company performance and/or costing more relative to industry benchmarks. This is the "competency and cost" screen. Next, for each function identified, apply the "core function" screen by answering three fundamental questions with a yes, no, or don't know.



Michael Corbett, a leading outsourcing speaker, recommends the following three questions:

1. If starting the business today, would you still build this function or process internally?
2. Is your company so competent at this function that other companies might contract with you to do it for them?
3. Will your future top executives likely come from this functional area?

The strongest outsourcing candidates are those functions for which the answer is no to all three questions. The next best candidates are those functions for which the answer is no to one or two of the three questions. If the answer is yes to all three questions, the function is probably a company

competence and an inappropriate candidate for outsourcing.

To take an example, should a securities firm outsource an application such as HR? Should it outsource the technology for trading and other core business applications. In contrast to three likely no answers to Corbett's questions, for the corporate HR application, the trading and compliance systems that support the core functions of the business probably would produce a yes answer to two if not all three questions.

A third step is to examine what a particular function or process contributes to business operations, and what it contributes to competitive positioning of the company. Four categories are distinguished:

1. *Useful function.* A useful function or activity provides incremental benefits to the business but does not distinguish the company from its competitors. Typical examples: payroll, benefits, and accounting systems. Useful functions are prime candidates for offshoring because the business can gain by freeing internal resources to focus on more critical activities. And because suppliers have likely mastered this activity with lower costs and standardized work processes, the potential savings for customer are real and attainable.

2. *Critical function.* Critical functions or activities are critical to business operations but, like the useful function, do not distinguish the company from its competition. Lacity and Willcocks cite the IT staff is relatively isolated from the business and may pursue its own agenda.
4. *Critical differentiator.* These IT activities are both

Context Model				
1. Internal				
Hierarchy	Criteria	Past	Present	Future
1.1	Products & Services			
1.2	Target Markets			
1.2.1	Vertical			
1.2.2	Horizontal			
1.3	Distribution Channels			
1.1.1	Direct			
1.1.1.1	Sector A			
1.1.1.2	Sector B			
1.1.1.3	Sector C			
1.1.1.4				
1.1.2	Indirect			
1.1.2.1	Same Sector			
1.1.2.2	Related Sectors			
1.1.2.3	Large Projects			
1.1.2.4	Large Organizations			
1.1.2.5	Complete Life Cycle Management			
1.1.2.6	Architecture			
1.1.2.7	Business Process Optimisation			

example of an airline's aircraft maintenance system. Like its competitors, the airline must maintain strict maintenance standards set by the manufacturers and the industry regulator, but no benefits accrue from overperformance. Critical functions are good candidates for offshoring only if the external supplier can meet the stringent requirements for quality and responsiveness as well as low price. Best source, not cheapest source, would be the guiding principle for sourcing a critical function offshore.

3. *Useful differentiator.* These activities differentiate the company from its competition, but in a way not critical to business success. On the surface, these should probably not exist, but Lacity and Willcocks found that they frequently do because

critical to business operations and help differentiate the company from its competition. An example cited by Lacity and Willcocks is the reservation and check-in system of a European ferry company. Its competitive strategy is to differentiate through improved services, speed, and ease with which passengers and their cars complete the boarding. The company continually makes improvements in this process, and while it outsources a number of its IT activities, this system is maintained inhouse. The rationale is that this protects the company's expertise and permits the company to innovate more rapidly. Critical differentiators should rarely be outsourced to an external supplier, domestic or offshore; although contracted support might be brought in to meet temporary resource needs.

A fourth step is to consider whether it makes sense to consider an offshore solution. In doing so, it is important to assess the strengths, weaknesses, and risks associated with various countries and offshoring service providers.

Large suppliers exercise considerable leverage in negotiating price and service with suppliers of equipment and software; they maintain a bench of technical experts with greater range and depth than can the typical customer company because the supplier can utilize the expertise efficiently and effectively when spread over multiple clients; and the large supplier can specialize, focus, and gain repeated experience by managing tasks that probably would come around only once in the careers of many internal managers.

Reduced costs are a significant advantage of offshore suppliers. Also, because of the variety of clients and circumstances, outsourcing suppliers typically have a depth and range of experience that individual clients can't match. Just like the large outsourcers such as IBM, EDS, CSC, and Accenture, the large offshore suppliers (Tata Consulting Services, Wipro, Infosys, and Satyam) have hundreds of customers in many industries around the world. These suppliers, for example, may have assisted customers with multiple restructuring efforts .

F.5. Evaluation and selection of suppliers

In deciding which suppliers to consider, research and identify those suppliers who are the strongest in various service offerings. Companies that have previously taken services offshore can provide useful information about which suppliers are best at both providing the services and building excellent relationships.

After narrowing potential offshore suppliers to a few that will receive the RFP and have reputations as being among the best in the services considered for

outsourcing, distribute the RFP, evaluate the proposals, and narrow the list to two or three. Then negotiate with them. You can often win improved pricing and service agreements by negotiating with the top two suppliers and then striking a deal based on the best and final offer.

It is important to develop a baseline of current costs for the function(s) to be outsourced so they can be compared with supplier proposals. Carefully define service requirements with sufficient depth to make them measurable.

Develop both costs and service requirements in the light of expected technological and business change (which may be interrelated) over the expected life of the offshoring arrangement. It is important to understand the offshore outsourcer's approach to fulfilling a requirement. You do not want an outsourcer's response to simply be "We can do it"; more important is the outsourcer's explanation of how it will be done.

Your RFP should not give detailed process flows or suggest approaches, as you are relying on the supplier's vast experience to bring innovative best practices to your organization. The offshore outsourcer's approach will likely be different, which can be good or bad. It is up to your evaluation and selection team to determine if the proposed solution is an improved and viable approach.

Also, encourage supplier competition throughout this process, evaluate their responses, decide whether offshore outsourcing is still desirable, and, if it is, proceed to contract negotiations with one or more suppliers.

Evaluation and selection guidelines

Objectives and requirements	Develop and gain agreement on the offshore outsourcing objectives. Define requirements that are detailed and measurable. State requirements in terms of the performance of the customer's organization and its business.
Performance	Link the offshore supplier's compensation to the customer's business performance. Align the supplier's objectives and performance compensation with customer objectives wherever possible.
Costs	Determine the relevant baseline costs and estimate future costs based on the requirements and baseline. Without a good idea of future needs and the costs of meeting them, it is not possible to outsource effectively and efficiently. Identify all the costs. Some costs may be in user budgets or in multiple supplier charges. Remember that size, complexity, the need for flexibility, and newness to offshore outsourcing raises the costs of managing an offshore outsourcing relationship and raises the risks.
Process	Prevent the suppliers from short-circuiting the disciplined evaluation and decision making process by going directly to senior managers or user managers for quick decisions. Be clear and complete in the RFP; you get what you ask for and no more. Keep the process simple but rigorous. Give each supplier the opportunity to present its proposal in person and answer questions. Set deadlines and enforce them on both parties. Tell the suppliers everything they need to know to respond effectively to the RFP.
Relationship	Foster a professional relationship among and with suppliers from initial contacts through contract signing. Develop the foundation for an effective relationship and build trust in all dealings with suppliers from the outset. Require suppliers to respond to everything you need to know in order to make a sound decision. Emphasize a win-win attitude from the outset. Set a schedule and insist that all parties stick to it.

Evaluation and selection guidelines

References and full disclosure	Check supplier references. Require the offshore suppliers to provide customer contacts with which they have less than an excellent relationship, and check them, too. Require full disclosure from both sides.
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G. Contracting issues and procedures

A sound contract is clear about what is to be done, who does it, who owns what, which party pays, and what happens if something is not done correctly. While the best contracts are win-win arrangements for both parties, it is important to understand that an outsourcing relationship with an offshore supplier involves more than a contract. The key issues in negotiating a contract include: (1) defining the issues, scope, desired results, and metrics; (2) determining the change management processes, which can be particularly difficult across borders with multiple work sites; and (3) defining which company will be responsible for what, and where. Outsourcing contracts also involve agreeing on a schedule and cost algorithms, resolving personnel issues, determining how to manage the relationship, and a number of other important factors examined below.

The contract is critical for successful offshore outsourcing, but it cannot guarantee control over the supplier. Consequently, success of the relationship with a supplier involves more than a contract. Choosing suppliers based on reputation overcomes some of the natural limitations of a contract negotiated at one point in time. Other ways include incentives and contract provisions that allow review of supplier work and permit changes in requirements, termination provisions in the contract, and provisions to renegotiate the contract.

Pricing. Pricing arrangements can vary between fixed prices and time-and-materials arrangements. Prices should reflect the circumstances surrounding the offshore work and give suppliers proper incentives.

Bargaining power. What can be accomplished in contract negotiations depends in part on bargaining power. Power depends on relative dependency. The party more dependent on the other has less power; the party less dependent on the other has more power. Negotiations should begin with a clear view of the customer's interests and the type of supplier relationship that will further those interests.

Control. Control over a supplier can be accomplished by monitoring supplier output or supplier behavior. (i.e., how the supplier works). Monitoring offshore behavior is more expensive and difficult than monitoring output and is usually not easy to accomplish for work performed offshore. One approach used to monitor behavior is the assignment of customer employees to the offshore location.

Important contracting principles include the following:

- Perform careful due diligence on the offshore suppliers and learn as much as possible about the customs, cultures, and laws of the country as well as the supplier's organizational and business strengths, weaknesses, and opportunities before negotiations begin.
- Develop a negotiation strategy before sitting down with the offshore suppliers. A term sheet can be used to define the essential issues for negotiation and to help you separate the essential from the not-so-essential contract provisions.
- Discuss among yourselves and reach agreement within your negotiation team on

which issues are important (and less important) in the negotiation.

- Never accept a supplier's standard contract without employing competent counsel to carefully scrutinize and change it. Instead, require in the RFP that each candidate provide with its proposal a complete proposed contract. The proposed contract can then serve as the basis for your negotiation terms and conditions and the information for developing the negotiation strategy.
- Maintain a win-win attitude, foster open communications, pay attention to detail, and enforce a realistic but firm schedule.
- Win the points that matter most. Successfully negotiating a sound contract revolves around knowing what really matters; winning every point is not the objective.
- Stay dedicated to the process. This is not a part-time job. It demands 110% dedication from everyone, including the supplier.

Summary points about contract provisions are as follows:

- The contract should completely specify requirements, and requirements should be stated in measurable terms.
- The contract should make the supplier responsible for meeting requirements.
- The contract should be flexible enough to accommodate some change in requirements.
- Contract provisions should allow for growth associated with business expansion. If changes in technology are anticipated, the contract should accommodate these as well. Some changes can't be anticipated. The contract then should specify a process for identifying and authorizing additional work and also may

contain formula for the pricing of additional work in various categories.

- Offshore outsourcing contracts covering applications development work should include provisions for reviewing or auditing the work as it proceeds.
- Pricing should reflect the goals of offshore outsourcing. When the goal of offshoring is to control costs, fixed price arrangements are preferable. When the goal is flexibility or enhanced service, variable pricing arrangements are preferable.
- Pricing usually should address inflation, growth in service, and changes in technology that alter the underlying costs of providing the services. Invoicing and payment provisions should be included
- Incentives and sharing arrangements should be written into contracts. These are particularly important in partnerships.
- The management structure and governance process should be part of the contract. The complexity of management structures should vary with the size, complexity, and nature of the offshore outsourcing relationship.
- The contract should specify the individuals who will represent the offshore supplier and give the customer organization some control over changes in key supplier personnel. A 70/30 offshore-to-on-site ratio of supplier personnel is typically the best balance.
- The contract should establish basic processes and procedures to be followed during the life of the relationship, such as the right for review and audit of supplier work and how dispute resolution and escalation will work in ways that promote positive learning and timely resolution.

- Every offshore outsourcing contract should include provisions for normal expiry of the contract and for premature termination. While premature termination for cause or convenience is rare, the intent of the contract provisions in both types of premature or normal termination is to ensure a smooth transition to another supplier or to bringing the outsourced function back inhouse.

The outsourcing contract should be viewed as the foundation of an outsourcing relationship. A poor contract jeopardizes the relationship before it begins. Avoid haste and contract carefully. For any outsourcing agreement, from the outset the focus should not be on who wins the best deal, but rather on negotiating a fair and reasonable contract for both parties. Because each aspect of the offshoring relationship is governed by the contract, both the client and the offshore supplier should try to identify and agree on everything that is relevant .

Major Contract Provisions	
Terms of the agreement	The trend is for shorter-term renewal options (e.g., three to five years). Ensure that the contract stipulates that a renewal occurs only if a renewal notice is sent.
Service levels	It is vital that the contract specifies as accurately as possible the services to be provided in the contract. This includes establishing minimum service levels and identifying any ancillary services to be provided.
Ownership and confidentiality of data	The agreement should specify that the customer retains ownership of the data it submits to the supplier and the data must be kept strictly confidential.
Warranty	Ensure that the supplier warrants that it will provide the services as defined in the agreement and will accommodate a specified increase in requirements.
Exhibits	Exhibits should be carefully read. As complex transactions, first drafts of offshoring contracts usually contain exhibits that are important but often incomplete. For some reason, people do not read exhibits carefully to detect omissions and errors.
Incentives	Consider providing the supplier with an incentive to perform. Such incentives may include guaranteed savings or shared benefits/risks.
Performance measures	A sound contract includes performance measures, because without them, there are no objective criteria for managing performance and the relationship. It helps considerably to use such measures long before the contract is developed so that a history of effective measures can be used as a baseline. Managers whose organizations lack such measures should not ignore them in the contract, but instead include a provision stipulating that the two parties agree to establish a baseline over some period of time and begin using the metric on a specified date.

Major Contract Provisions	
Anticipating change	Contracts should accommodate cycles of demand that require an adjustment in services. If, for example, an organization becomes smaller, it could find itself paying for services that were priced based on conditions that no longer exist. Consider all the reasons why a contract might not work and ensure that the agreement can be terminated if necessary. Give an incentive to the supplier to meet and exceed the contracted performance standards and continuously improve performance. Ensure that the incentives of the individual managers on both the customer and supplier sides also are consistent with the overall goals and with each other's incentives.
Force majeure	These provisions state that the supplier is excused from performance if it experiences "Acts of God" -- natural disasters that could not be avoided. Such events should limit the period of relief to something specific such as 30-60 days
Disclaimers	Accept the fact that disclaimers will be part of the contract but ensure that a disclaimer does not void the warranty and indemnity sections of the contract.
Bankruptcy	Both parties should consider the possibility that the other may go bankrupt or otherwise cease to do business for a variety of economic or political reasons, which changes the situation and obligations.

H. Corporate relationship with the supplier

There are four alternatives for a company contemplating an offshore supplier relationship:

1. an alliance, partnership, or joint venture with the supplier;

2. vertical integration of the supplier;
3. merger with and/or acquisition of the supplier;
4. outsourcing with the offshore supplier.

H.1. Alliances, partnerships, and joint ventures

Equity-holding and joint-venture relationships allow the client and supplier to take part ownership in each other's company and/or form a joint venture – for example Mahindra and British Telecom joint under Perot Systems-Swiss Bank. One difficulty encountered in equity-holding relationships is that the supplier may become less focused on service to the client and more focused on acquiring new business. As a major stockholder, the board of the client company may also encourage business expansion. As a result, these types of relationships have not necessarily encouraged improvement in performance at the operational level. A similar type is a joint venture, in which the two companies create an independent entity, jointly owned, to provide the services¹².

An alliance, partnership, or joint venture is challenging, considering the considerable communication and integration activities that must take place between the two companies. Partnerships involve investments that can't be recovered if the partnership fails; and a partnership is usually intended to last a long time, making it difficult to recoup investments in the short run.

Benefits that sustain partnerships are usually those that arise from combining client and supplier resources and abilities in ways that are unique and that generate some measure of competitive advantage.

Partnerships should be based on reciprocal, mutually supportive actions so that both companies gain over time. Partners should learn to trust that the other

party will take positive actions and refrain from opportunistic actions; develop a mutual willingness to give and take in resolving differences; and routinely share gains, risks, losses, successes, failures, and blame. The desire for continued participation in the benefits of a partnership usually discourages opportunism. Mutual consent, instead of formal rules and procedures, tends to prevail. The contract does not play the same fundamental role in partnerships as in outsourcing or purely contractual arrangements.

A partnership contract serves as a commitment to short-run investments and to behaviors that support the partnership, and it provides a safety net for both partners with contract provisions for transition and distribution of assets should the partnership fail.

To succeed, partnerships need long-term goals that involve the sharing of mutual gains. The long run, however, comprises a series of short runs. What builds and sustains partnerships in the short run are the sharing of knowledge across organizational boundaries, mutual dependence on the core competencies each partner possesses, and linkages between the two organizations at the level of information, processes, and people in the value chain.

Building a partnership takes time and commitment because mutually supportive behavior and trust are foundations that can't be erected immediately. However, if conditions are right, the elapsed time can be less, depending on how actively the senior managers in both firms pursue building a solid partnership.

It takes considerable effort to achieve the high level of integration required in partnerships, chiefly in areas such as education, communication mechanisms, joint planning teams, colocation of personnel, rotation of personnel between the two organizations, and top management commitment.

These integrating actions are difficult when bringing together two companies from the same country; the complexities and problems are magnified when trying to integrate organizations from two countries because of language and other cultural differences.

In summary, a successful partnership with an offshore supplier can be more difficult than the typical outsourcing relationship. A company contemplating an alliance or partnership should analyze the benefits, costs, and risks carefully and consider having a successful outsourcing experience as a prerequisite to a supplier partnership. With time and success working together, the outsourcing relationship can develop and mature into a partnership.

H.2. Vertical integration

A traditional strategy used for decades is vertical integration, which extends a firm's competitive scope forward and/or backward within the same industry¹³. If a company such as Capgemini or IBM acquires a software company in China, for example, it remains in the same industry but now has business units in at least two locations in different countries. Similarly, should IBM decide to integrate forward with retail computer stores and sell directly to consumers, it would remain in the computer industry, and its competitive scope would extend forward in the industry value chain.

Typically, a company is attracted to vertical integration to reduce costs, to add to its technological and competitive strengths, or to differentiate its offerings. Vertical integration with offshore outsourcing suppliers may make sense for companies like Accenture, IBM, or others in the outsourcing business, but it is not normally a viable alternative for a typical company that is not in the IT services industry. There are potential disadvantages for companies in the outsourcing industry as well.

First, vertical integration boosts a firm's capital investment in the industry, increases business risk if the industry goes sour, diverts financial resources from other worthwhile purposes, and locks a firm into relying on its inhouse activities and sources of supply that may later prove more costly than using an outside supplier.

Second, integration forward or backward often calls for radically different skills and capabilities. Software product development, applications maintenance, contact center operations, distribution, R&D, and customer care are all different business functions with different required skills.

Finally, backward integration may reduce a company's flexibility, increase the time it takes to quickly make design or process changes, and reduce time to market. For all these reasons, vertical integration with offshore outsourcing suppliers normally makes sense only for companies that are not in the outsourcing business.

H.3. Merger and acquisition

Some client companies prefer the acquisition of offshore capabilities. This may make sense in those situations in which merely sending work offshore does not go far enough in providing access to needed resources and capabilities. Acquiring an offshore supplier might strengthen a company's market position and open new opportunities in a new region or country; and combining operations might fill resource gaps and allow the new company to do things that two separate companies could not do individually. Together, they may have stronger technological skills and competitive capabilities, realize more cost-savings opportunities, achieve wider geographical coverage, and increase financial resources.

However, acquiring suppliers rarely achieves the intended benefits. Sometimes this is because of

inflated expectations. In other cases the intended benefits prove much more elusive than anticipated.

Combining the operations of two companies can meet with formidable resistance from employees and middle managers. Major differences in management styles and cultures can cause the expected benefits to take much longer to realize or to never be realized. While some companies have successfully acquired offshore companies, offshoring is a supplier strategy more likely to succeed for most companies¹⁴.

H.4. Outsourcing with the offshore supplier

Narrowing the firm's boundaries by offshoring pieces of the value chain that had been performed internally makes the most sense when a value chain activity can be performed better or more cheaply by the offshore specialists.

Compared to other supplier strategies, offshore outsourcing is almost always a better alternative for the typical business. Offshoring makes the most sense when the activity is not crucial to the firm's ability to achieve sustainable competitive advantage and the outsourced function will not hollow out the company's core competencies.

V. Managing an Offshore Relationship

In years past, many companies maintained an arm's-length, usually adversarial relationship with suppliers by awarding short-term contracts for supply items or services according to precise specifications. And although the company might engage the same suppliers repeatedly, there was no assurance that this would be the case. Price was usually the determining factor for getting the work. The threat of switching to a different supplier was the company's primary weapon. Today, most companies are abandoning such approaches in favor of fewer, highly capable suppliers.

In the new outsourcing model, the customer company views the outsourcer as a valuable asset and source of ongoing value. Time and resources are devoted to managing the relationship and maximizing its value. Managers from both companies are held accountable for achieving the best possible value from the relationship, with the intent of keeping the relationship for as long as it brings value, understanding that, over time, new parties and alliances may need to be formed as technology and organizational requirements change.

Companies that outsource strive for long-term relationships and concentrate on aligning the outsourcer's motivations with appropriate incentives. They invest in tools that objectively measure performance and contribution to business value and that continuously foster communications and a good working relationship. Interdependency between the two companies normally emerges in which change in one affects the other, and the customer and outsourcer behave as an integrated chain rather than as win-lose adversaries. In time, the two parties may decide to move more toward a

partnership rather than an offshore outsourcing relationship.

The relationship with an offshore outsourcing supplier requires discipline on one hand and flexibility and cooperation on the other. Discipline is paramount in market-type supplier relationships, and flexibility is more important in partnerships. Contract requirements for supplier performance are also the basis for control.

A. Security of intellectual property

An important management consideration is looking into issues regarding physical security of intellectual property and trade secrets. A related consideration is sharing of data and software across organizations and teams. This requires strict version control to protect the integrity of programs and data. It is important to keep versions of critical components in more than one location to apply backup and version control procedures and to use shared configuration control tools.

B. Integration of supplier processes and operations

The client and offshore supplier organizations must achieve some level of process integration from the outset of an offshore outsourcing arrangement. The integration necessary for success is minimal in the case of market relationships like use of offshore contract labor, and extensive in the case of offshoring of application development projects.

Integration occurs at multiple levels -- at the interfaces between client and supplier organizations, among units within the organizations, among people in the organizations, and among systems in the organizations. All of these interfaces must be managed. Integration issues include planning, scheduling, management structures, management

control mechanisms, management skills, interpersonal relationships, communication with employees, communication with the offshore supplier, and dispute resolution processes.

C. Handling disputes

While the contract provides the basis for dispute resolution, day-to-day handling of disputes depends on the offshore outsourcing managers. If possible, collocate the offshoring managers from both organizations so that person-to-person communication is easy and spontaneous. Face-to-face communication is the most effective.

Poor management of people involved in the arrangement can seriously jeopardize the success of offshore outsourcing. Client and supplier managers should discuss and attempt to reconcile differences in their approaches to conflict management as part of the transition process. This helps to develop a unified and cooperative approach to resolving disputes.

Think twice about using a power advantage over the supplier to resolve disputes. Habitual use of power erodes cooperation and eventually destroys trust in an offshoring relationship.

D. Managing the risks

D.1. Mentality and cultural gap

Regardless of location (East Europe, Asia – yes even in west Europe), the number-one risk is the mentality gap. This gap results from national differences in culture and mentality but also because of differences supplier and buyer. The buyer has to put in place procedures and terms for his buying department, to minimize these risks. This is critical already during the assessment of the potential destinations and future suppliers. They should assure, the offshore team will adopt the processes and quality control

systems of the corresponding onshore department. Staff should be measured, reviewed and rewarded against these standards, to ensure that the quality of work remains consistent across shifts and over time.

D.2. Communications differences

Strong accents and cultural differences are areas of obvious concern that may interfere with communications or cause misunderstandings between the supplier and the customer¹⁵. Some countries may lack adequate data and voice communications, causing difficulties in using videoconferencing for day-to-day communications between on-site and offshore staff. The location of supplier personnel can be a very important issue, particularly when coordination with users or internal people is critical for the smooth provision of services.

Communications difficulties increase for people working in different locations in the same city, in different regions of a country, and in different countries. That's why it is important to locate about 30% of offshore staff on-site and communicate often between the on-site and offshore teams using videoconferencing.

D.3. Transition

In addition to office culture, there are well-learned lessons to be followed in how skills are transferred (how should processes be in which order be taken offshore). The best insurance for these to be implemented successfully is experience, particularly in the use of proven managers.

E. Relationship management team

The relationship management team should be identified and appointed as early as possible, not later than the outset of the transition period. People who participated on the offshore outsourcing

evaluation and negotiating team are well versed in the details of the arrangement and should have already established relationships with supplier staff. So they are good candidates for the relationship management team.

The offshore outsourcing manager is involved in managing the costs and benefits of the services in question and is responsible for monitoring supplier performance and trying to balance the cost of monitoring against the benefits that monitoring brings. The perspective and skill set needed by offshore outsourcing managers is somewhat different from those for internal department managers. Yet it's common to automatically appoint the IT director to manage an offshore outsourcing relationship.

Necessary skills for relationship managers involve more than technical knowledge. They include business oversight abilities in monitoring requirements, approving changes and handling disputes; technical oversight abilities in planning technology architectures and setting standards; financial oversight abilities in monitoring costs and paying invoices; and contract administration ability to adjust the client-supplier relationship in response to changes such as new or declining business requirements.

F. Information flow and documentation

It is advisable to designate one focal point for receipt and distribution of information from the supplier. If the deal is a large one, a point of contact might be designated for each of the major functions. A focal point ensures that vital information is passed to the right people and helps with management of the offshore outsourcing relationship. It is also wise to document the flow of information, including information passed in all meetings, so that questions and problems can be matched with responses.

G. Change control

It's rare for an offshoring relationship to endure without some changes. Both sides must establish ways of addressing and controlling change. Large changes may require amending the contract, but many smaller changes can often be made within the framework of an existing contract. And changes can be very challenging when they involve more than one supplier.

H. Meetings, reviews, and audits

The communication needed for effective management of offshoring begins with regular meetings and reviews involving managers on both sides. Meeting schedules may be specified in the contract, and if not, a schedule should be established early in the transition phase. Be sure the relevant people from the supplier side are obliged to attend these periodic meetings or reviews and have authority to make decisions. Audits are an important way of maintaining control over suppliers and ensuring the quality of supplier work. At the startup, the audit procedures are put into action. It's best if the contract specifies audit frequency and/or the conditions under which audits occur. If these are not identified in the contract, the client should set supplier expectations with respect to the areas to be audited, conditions, and frequency.

I. Anticipating contract termination and renewal

Offshoring contracts can expire in one of two ways: in the normal way at the end of the contract or prematurely. In a normal expiration, renewal with the same supplier is the preferred alternative in most situations. However, if unsatisfied with the current supplier, the customer may want to outsource the same work to another supplier. In either case, review

the experience of the current offshore outsourcing relationship for desirable changes that can be incorporated into the next contract.

When the work is to be transferred to another supplier or brought back inhouse, develop a plan for transitioning the outsourced function to a new home. The planning should begin in the analysis phase of the current contract, when requirements for transfer are identified. Elements of the plan should be incorporated in the contract so that the supplier provides the resources and assistance necessary to make a smooth transition.

Even if the contract is written to allow termination for convenience, it can carry very steep costs, not only in charges and legal fees but also in the threat to service continuity if a supplier resists the termination and does not cooperate.

In offshore outsourcing relationships, the incumbent supplier has an advantage over other suppliers in winning the work at contract renewal time because of the supplier's knowledge of the customer's organization, problems, requirements, and processes.

The appropriate time to tell a supplier of your intentions to terminate a contract depends on how much the supplier wants the business. A supplier that is keen on the business may improve service in the hopes of keeping it. But a less interested supplier may short-shrift the customer after termination is announced. In a situation in which the supplier is keen to retain the business, be up front with your intentions; when the supplier is not keen about retaining the business, keep termination intentions a secret as long as possible; and in all situations, avoid the threat of termination as a way to improve supplier performance. Threats seldom motivate improved performance or better behavior.

VI. Offshoring pitfalls and to-do's - primer

A. Success factors

1. *Identify and analyze what, and what not, to outsource*

The first success factor is to know what should and should not be a candidate for outsourcing and, of those identified for outsourcing, which, if any, are strong candidates for nearshore and/or offshore work. As we have seen, this has four steps:

- identify which, if any, business functions and processes are contributing least to company performance and/or costing more relative to industry benchmarks. This is the "competency and cost" screen.
- for each function identified, apply the "core function" screen
- examine the distinction between what a function or process contributes to business operations and what it contributes to competitive positioning of the company.
- consider whether it makes sense to consider an offshore solution, by assessing the potential of offshore countries and suppliers.

2. *Develop a plan, and involve many groups in it*

Develop a detailed plan approved by both the steering committee and senior management. A good plan includes early and continuous involvement of HR professionals as well as outsourcing, legal, and public relations experts.

HR can reassure and keep the staff informed; attorneys can help navigate the complexities of employment and contract laws; outsourcing advisors can advise, assist, and/or manage the outsourcing evaluation, negotiation, and implementation process; and public relations specialists can deal with internal and external critics and constituents.

During the early part of the process, the most important step is development of a plan that defines the problem and the objectives of offshoring, establishes the project plan and schedule, allocates resources, assigns responsibilities and accountabilities, and prepares everyone for the offshoring process. There is no substitute for clearly articulated and understood objectives approved by the executive team that every stakeholder group understands and shares as objectives. Reaffirming the objectives at various points along the way is also smart.

3. *Know the key stakeholders and their expectations*

A stakeholder group consists of those with shared or similar expectations, perceptions, and goals. Lacity and Willcocks have identified eight types of IT stakeholders, consisting of both customer and supplier stakeholder¹⁶.

1. Senior executives of the customer company. Senior client executives expect to see demonstrated business value for IT expenditures. Their inability to assess IT benefits often causes senior management to focus on IT costs.

2. Senior IT managers in the customer company. This group's concerns center on balancing service excellence expectations of users with the cost-containment demands of senior business management.

3. IT staffs in customer company. As technical enthusiasts, customer IT staffs focus primarily on service excellence, but within budget and time constraints.

4. IT users. IT users expect service excellence. Cost implications are often not apparent, or of concern, to this group. Ease of use, function enhancements, latest capabilities, etc., are of the greatest importance.

5. Supplier senior management. Supplier senior managers negotiate deals that will satisfy customer management while maximizing profits.

6. Supplier account managers. Account managers try to balance demands of customer satisfaction and profitability.

7. Supplier IT staffs. As technical enthusiasts, supplier IT staffs focus primarily on service excellence, but within budget and time constraints.

8. Subcontractors. Subcontractors are expected to deliver on their contracts, while they seek more direct relationships with end customers.

Lacity and Willcocks note that stakeholder relationships are dynamic. The same two people can fight one day and collaborate the next, with the relationship experiencing different points along the relationship continuum. They identify four generic types of relationships:

1. *Tentative relationships* when stakeholders have no shared history. .

2. *Collaborative relationships* when stakeholder goals are shared and fostered because all parties are part of the same organization, e.g. customer senior executives and customer IT managers, which both want the best service at the lowest cost

3. *Cooperative relationships* which exist when goals are complementary. Each party needs something from the other to succeed. If the supplier suffers, the customer suffers, and so on.

4. *Adversarial relationships* when stakeholder goals are in conflict. Three activities can be inherently adversarial: (1) negotiating the original contract; (2) establishing precedents for contract interpretation during transition; and (3) renegotiating or realigning the contract during the term of the contract.

4. *Apply a few rules of thumb for managing change*

Successful offshoring is largely about managing change across organizations, borders, and cultures. A few rules of thumb should be applied:

Leaders should use their skills, emotions, and intellect, and if risks are to be taken, they should be taken as part of a purposeful strategy

Work on the most promising outsourcing functions first. Do not try to salvage a hopeless situation with offshoring.

Begin with an understanding of the problems to solve and the stakeholders involved.

Communicate effectively, to obtain a basis for building a sound offshoring strategy

Light many fires with internal teams and allies, because as soon as the change effort turns its back, other forces will press things back toward the status quo.

Load the program for success. Build an umbrella over the offshoring evaluation and implementation process. Maintain an optimistic attitude. Do not ignore destructive forces. Be particularly

aware of the constructive forces and potential allies.

5. Understand and mitigate the risks

No IT activity or business process is risk-free. Typical IT risks are technical, functional, political, environmental, and systemic. The offshoring project is affected and threatened by these same risks¹⁷.

Technical risks arise when what is to be accomplished requires a change to new, unproven technology or systems. Project risks increase when the project is large or complex relative to the resources in time, money, people, and skills available.

Functionality risk is the risk that the project performs according to specifications but fails nonetheless because the specifications were in error or because what is actually needed exceeds what was specified for the project because of a changing environment. Political risks arise when individuals or groups within the organization resist or even act to undermine a new project.

Environmental risk results from governance, governmental bodies, or the economy that compromise the success of the project. Systemic risk is a large shift in the environment that changes major conditions and assumptions, invalidating the analysis on which a project was originally based.

Other potential risks:

- The transition to offshoring is poorly handled, causing alienation on the part of IT users and IT personnel.
- The offshoring contract is incomplete and does not cover all contingencies.

- The relationship with the supplier is not appropriate to the function that is outsourced. A bad supplier takes advantage by underperforming, not performing, overcharging, stealing personnel or data, or undermining the relationship in various other ways.
- Support of business and critical functions is compromised because of problems with the supplier. Managing offshoring risk begins with an understanding of risk exposure. Risk is multiplied in any situation that involves a substantial departure from the past.

Risk exposure is highest under the following conditions:

- The technology is new (unless the company's purpose is to shift to a supplier that has the experience with the new technology as a risk-reduction strategy).
- The organization is critically dependent on the information services to be outsourced. Reliance on the outsource function for competitive advantage or mission-critical functioning raises the risk level substantially.
- The function is large or complex. The service required from a large or complex function is likely to be more difficult to specify in a contract, and there is simply more possibility for misunderstanding, miscommunication, and conflict.

For the offshoring arrangement under consideration, take each of the possible areas of risk and brainstorm possible sources of risk. If the environment could have great impact on the success of offshoring, scenario analysis might be effective. Three scenarios might be developed: the first projects the future if present trends continue; a

second projects the environment and its effect on offshoring under an optimistic set of assumptions that favor the offshoring decision; and a third estimates the future under a pessimistic set of assumptions that are unfavorable to offshoring success. Exploring scenarios may result in a more robust and realistic exposure of the risks involved.

For each risk identified, analyze the sources or the underlying causes of the risk. If employees are likely to be unhappy with offshoring, analyze the causes of this unhappiness. Further analyze the causes, tracing them back in a causal chain until fundamental or root causes are identified. Breaking down causes into further detail is extremely useful in order to fully understand the risks, estimate risk probability and possible effect, and ultimately to manage risks when the offshoring project goes forward. Try to quantify risk exposure for each risk identified, even if this can only be done in terms of categories such as "high," "medium," and "low."

Effects can include costs incurred because of the risk, losses that might result from the risk, and delays. In addition, recognize that each risk exposure can have a time profile with little or no exposure at some times during the term of the contract and high exposure at other times. If exposure varies over time, estimate the time profile as well. Simple diagrams that chart exposure help to understand the risk.

It is important to realize that some risks may be interrelated. A new technology, for example, presents risks in that it may not function correctly, but new technology also may unleash a set of political risks when users are uncomfortable with the new elements or favor an alternative.

Scenario analysis is a technique that can lead to better estimates of exposure to risk -- both

estimates of the probabilities of the occurrence of unfavorable events and estimates of the magnitude of their effect.

Finally, prioritize the risks. Discard those judged to be insignificant. Of those remaining, beginning with the most significant, make a reasoned guess as to how successfully each risk can be managed and at what cost. If management can include preventive efforts, adjust the probabilities accordingly and include the management costs in the cost analysis. If monitoring to detect the occurrence of a risk and action to minimize the effect of the risk are feasible, rework the risk analysis and size of exposure to reflect this.

After identifying the risks associated with offshoring, the team should consider ways in which each might be mitigated or minimized. Risk management consists of planning, resolution by elimination or reduction, and followup or monitoring.

For each risk, think of approaches to managing it. Can the risk be avoided or reduced? If it can't be avoided, is it possible to shift the risk to the supplier? Is it a good idea to make such a transfer? How much time and expense is involved? Are the efforts onetime or continuing? How successful are management efforts likely to be?

Determining who should be involved in risk analysis depends on the issues. For an offshoring decision that is noncontroversial and involves a very limited and stable function in a stable environment, minimal risk analysis is needed and can reasonably be undertaken during a meeting or two. Complexity is lessened somewhat if the project is seemingly noncontroversial, and most key stakeholders favor offshoring. Unfortunately, because such stability is rare, it is important for

the team to analyze the risks of offshoring versus the risks of outsourcing domestically or not at all.

6. Answer the key questions

A company's steering committee and its executive sponsor should ensure that several questions are asked, that the answers are agreed upon early in the process, and that questions and answers are revisited as often as necessary.

1. What are our core competencies? Which services/support functions are not part of our core competencies?
2. For those functions not part of our core competencies, which can an outside supplier best perform?
3. Which suppliers are the best of breed for those services/support functions that are not part of our core?
4. Can and should any of our problems be fixed internally before outsourcing domestically or offshoring?
5. Which problems or opportunities do we hope to solve or achieve with offshoring?
6. Which key stakeholders must take part in the offshoring evaluation/decision process? Which stakeholders must approve the process and decision? Which stakeholders must be informed but need not approve the process and decision?
7. How can we best handle HR issues?
8. What is our plan for employee communications along the way?
9. Which criteria will we use to evaluate supplier proposals and select the finalists?

10. Do the expectations of key stakeholders (executive management, the board, influential suppliers, important customers, partners) differ significantly? If so, what is our solution?

11. Are stakeholders supportive of the offshoring objectives and the project schedule?

12. Is the offshoring schedule for the request for proposal preparation, proposal evaluation, contracting, transition, and implementation phases realistic and adequately resourced?

7. Oversee the evaluation and selection process

Early in the evaluation process, appointment of an executive sponsor and a steering committee is crucial. For larger offshoring initiatives, top management must play a key role. For smaller initiatives, mid-level managers might do the heavy lifting with the support of senior management. The steering committee must have a mix of managerial and technical talent and representatives from user areas whose services will be directly affected by offshoring.

8. Establish a relationship management structure

The most successful relationships start off by creating a basis for long-term improvement of the relationship; carefully managing the expectations of all parties, and defining the metrics, scorecard, and evaluation process.

Well-managed relationships also start out with a joint management structure in place that facilitates frequent and easy communication at all levels, provides for joint goal-setting meetings as well as regularly scheduled performance reviews; offers training and education programs to better understand respective company cultures; and

rewards and recognizes supplier and internal employees personally and directly.

9. Sign a Complete Contract

Suffice it to say that much is involved in developing and negotiating a sound contract that is attractive to both parties.

10. Involve Senior Management in the Process

Senior management must take an active interest in the entire process, from agreeing with the candidate functions for outsourcing evaluation and defining the objectives of offshoring to establishing organization-wide commitment to the analysis and evaluation process and the final decision to outsource offshore or not to outsource at all.

In order to achieve the required organizational involvement, senior management should assign capable managers to the project. The entire process requires capable people who focus on the appropriate stakeholders involvement.

11. Pay attention to and understand the cross-cultural differences

An offshore outsourcer comes to the table with not only organizational differences but also cultural and societal beliefs and standards of behavior that differ from the customer's culture. It is important for both parties to understand the other's organizational and societal cultures.

12. Establish the right kind of supplier relationship

Relationships with a supplier can take many forms from a pure market relationship at one end of the spectrum to a cooperative relationship

(outsourcing, alliance, and partnership) or to an outright acquisition at the other extreme.

B. Failure factors

There are several factors that contribute to offshoring failure. While few failures are caused by only one of these, a combination of some or all of the following is found to be the root cause in most failed relationships:

Outsourcing for the wrong reason. It is a mistake to outsource offshore – or domestically, for that matter – on the basis of subjective or personal preferences or strictly on the lowest bid. Choosing a supplier based on the lowest competitive bid is an illusory advantage. Poor quality and performance may offset whatever is gained by lower prices.

Failing to pre-qualify the suppliers. It is important to conduct complete due diligence of offshore suppliers.

Fixing price and performance levels without a mechanism for continuous improvement. Rigid price and performance levels, fixed at the start of a relationship, set the stage for continued mediocrity and do not allow the parties to benefit from learning opportunities.

Ignoring cultural differences. Not recognizing and addressing cultural differences between the customer company and the offshore outsourcer can cause misunderstandings and eventually lead to distrust.

Signing an inflexible contract. All outsourcing contracts require flexibility; they are based on key assumptions regarding technologies, business conditions, personnel, and other relevant issues. As soon as the contract is signed, the factors underlying these assumptions begin to change.

Sourcing of IT-Services to Offshore Destinations
Strategy, Methodologies, Destinations

Failing to build the relationship foundation, or assigning new people to relationship management .

New team members may or may not understand the contract's objectives, expectations, and intentions. The team that negotiated the contract needs to stay engaged.

Failing to involve key stakeholders.

VII. Country Comparison

Choosing between countries, after assessing the opportunities and risks inherent in this choice, is an important part of the offshoring process.

The following sections offer a general overview of these opportunities and risks, as well as the capabilities and the economies of the relevant countries.

A comparative picture of gross national product and

share of 2.09% of the world market today, from 1.82 the year before¹⁸.

Country-wise data on labour costs are both impressive and alarming (See above). Moreover, the offshore countries have a definite advantage in numbers of skilled people. In 2001, more than 4 million highly qualified people were employed in India's IT and software industry alone. In China, similar numbers are reported, though here it is hardware production that predominates, and increasingly also the design and development of chips and computer hardware. In comparison, about 800.000 people in Germany work in the IT and communication sectors – and this includes call

GNP Gross National Product - selected countries



Illustration 2 GDP of typical nations - source: Bureau of Labour, US government

labour costs of selected countries is given in the accompanying Charts. Individual economic/demographic indicators and statistics on the countries can be found in our white papers:

[uniWPmarketAsia] and [uniWPmarketEastEurope]

In the main offshore countries, the industrial and services sectors already contribute significantly to economic development. Countries like China and India perceive this as a springboard to penetrate markets in industrialized countries. Their growing market share and penetration for software industry and services is demonstrated by India, with a market

center agents with telecom service providers.

Moreover, the educational level of the skilled workforce in countries like India is high, with university qualifications which are accepted internationally. In absolute terms the number of highly qualified university graduates in India is at least 5 times the number in Germany, although the percentage of highly qualified students in Germany is 90%.

The growing reservoir of technically qualified people in the emerging countries should be contrasted with the finding in Europe of a decreasing interest in technical education¹⁹.

Labour Costs - selected countries



Illustration 3 Labour costs of typical nations - source: Bureau of Labour, US government

This will result in an increasing migration of high tech companies and when added to the issue of high levels of taxation, is likely to become a burning political issue. Every year approximately 220,000 software developers complete their education in India. In China availability of entry-level software engineers per year is about 60,000. Some 12,000 new software engineers graduate from the universities in Russia annually. Germany employs a maximum of 300,000 software-developers and approximately 7,500 information technology students complete their education – in the US the figures is about 25,000.

Some researchers – for example from Gartner– are sceptical about the emerging country figures. For example about India several studies (like McKinsey

2004) conclude, that the demand for software engineers will in several years outgrow the graduated students by 100% and India as of today is not investing enough, to create a high scaled workforce like China, which invests ca. 8% of the GDP for the education – India 3.5% only. Nevertheless the figures of the graduated engineers prove the future dramatical shift, and provide one reason for the growth of offshoring and sourcing to these countries.

Graduates and entry level programmers

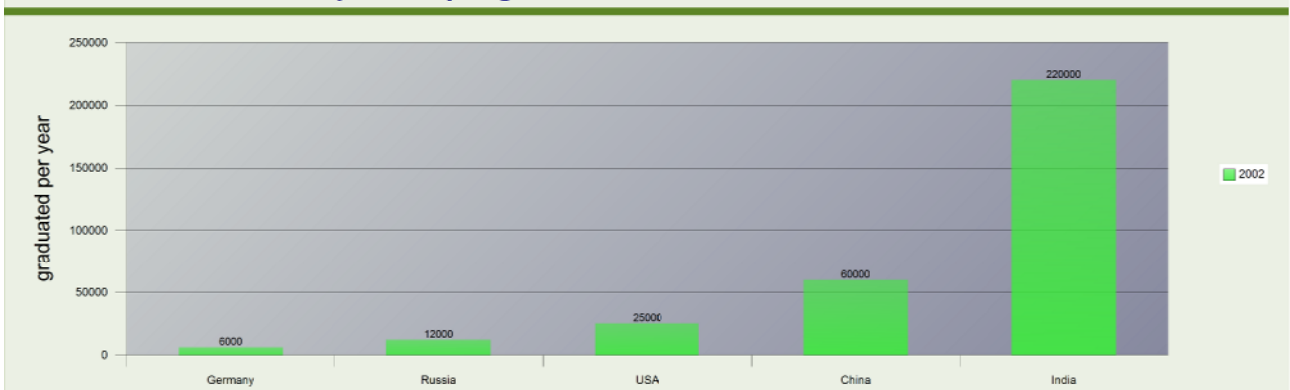


Illustration 4 Graduates and Programmers in Offshore nations - source: Bureau of Labour, US government

A. Assessment of offshore and nearshore destinations

Selection of the right location will be dictated by a number of key factors. Whilst the cost of staff differs between nations and cities this should be not necessarily be the key driver for selection. Also the factor of proximity should be not the only.

Five criteria are important in an assessment of a country's suitability: IT and business process maturity, presence of multinational companies (global reach and infrastructure like airport and telecommunications, facilities like banking and political climate), availability of skilled labor, expected future infrastructure development in the country, and scalability of operations.

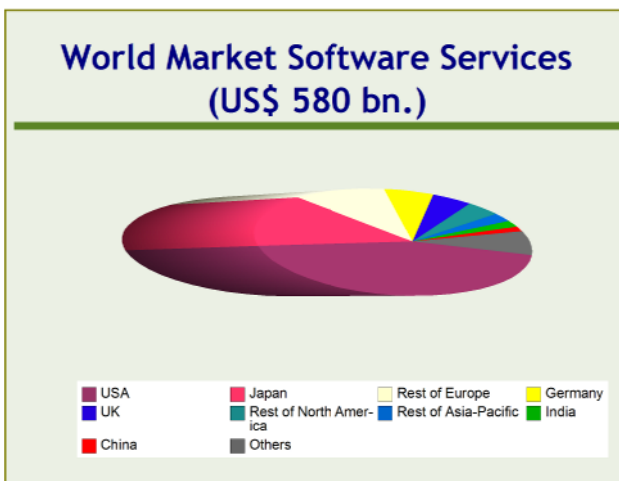


Illustration 5 World Market Software Services – source: EITO 2004

Each country has a unique matrix of strengths and weaknesses, which must be studied carefully before committing to a supplier. Costs, skill-levels, availability of the required skills at present/in future, language and accents, cultural factors, government regulations and infrastructure quality are all relevant in assessing a country's suitability.

In developing countries, services are prone to disruptions due to terrorism, political unrest, natural disasters, and other catastrophes. Before taking work

to an offshore location, evaluate whether the country has an uninterrupted power supply, backup generators, and redundant communications facilities.

An important management consideration, unique to offshoring, is physical security of intellectual property and trade secrets. These are important issues in any situation but are particularly critical in countries with different legal systems and enforcement mechanisms. While the leading nearshore and offshore suppliers maintain strong security measures and procedures to protect intellectual property, it is wise to limit offshoring to countries and companies that can offer security guarantees. The larger service providers typically provide these guarantees.

B. Ranking of offshore/nearshore destinations, and their specialities

A study by A.T. Kearney in 2004 ranked the most prominent countries for offshore services. India is the most well known destination, since it has so far grabbed the largest share of outsourced work. Depending on the study and source of figures, India is generating revenues in excess of US\$7-15 bn., whereas the former Soviet Union claims to deliver services for \$300m. Countries or regions with growing offshore and nearshore business include the former Soviet Union countries (Belarussia, Russia, Ukraine etc.), eastern and central Europe (Poland, Czech Republic, Slovakia, Rumania, Bulgaria, Slovenia, Croatia etc.), and the Philippines; the list grows as labor costs in India increase compared to those in other low-cost countries.

A.T. Kearney Offshore Location Attractiveness Index 2004

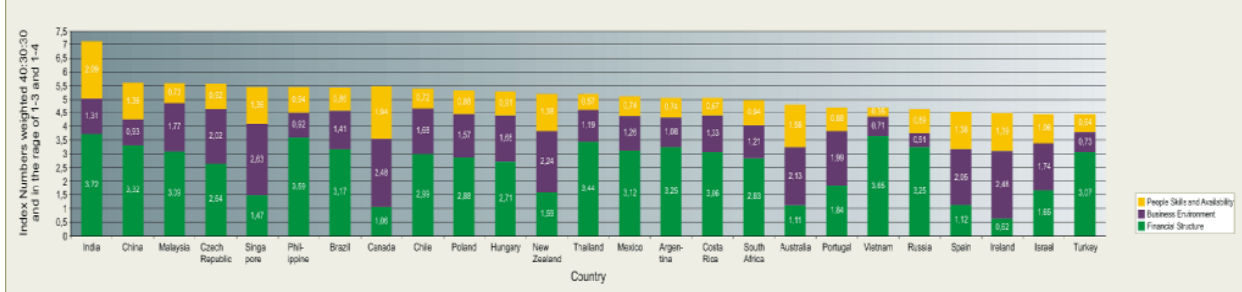


Illustration 6 Offshore Attractiveness - source: A.T. Kearney 2004

3A-Strategy's Senior Consultant Dr. Florian Frohwein cites the following country-wise IT specialities:

Selected Country	Examples of IT speciality
Belarussia	Application Development: large scale for IBM Mainframe, insurance companies and e-commerce, mid sized for financial services
China	Hardware manufacturing, product-embedded software, PC related drivers
India	Applications development and maintenance for large scale projects, data management and consulting, system design, hardware design, embedded software like for telecommunication equipment manufacturers, ITO, contact centers, BPO
Ireland	Contact centers, translation services for software and documentation, software development
Israel	Learning systems, high-end software
Hungary	Application development for example in the financial industry

Selected Country	Examples of IT speciality
Russia	Application development for mid scale, modeling and developing of rule based engines, security software and devices, algorithms, voice and translation engines, high-end software
Slovenia	Application development small scale, telecommunications and switching software
Ukraine	Application development small sized
The Philippines	Contact centers, animation, BPO, applications development

Table 1 Typical Offshore Functions and Destinations - source: Own research

Functions/Example Companies	Offshored Sample Functions
Back-office/American Express, Lufthansa, Swiss Air	Basic data entry, transaction processing, document management
Customer contact/Oracle, Dell, British Telecom	Call centers, online customer service, telemarketing, collections

Functions/Example Companies	Offshored Sample Functions
Common corporate functions/HSBC, ABN AMRO, Microsoft, SAP	Finance/accounting, human resources, procurement, IT help desk, applications development and maintenance, IT infrastructure
Knowledge services and decision analysis/McKinsey & Co., American Express, Arvato (Bertelsmann)	Research, customer analysis, portfolio analysis, claims processing, risk management, credit underwriting
Backup Data Center/AMG, Generali R&D/AIG, GE, Microsoft	Backup and Data Storage for worst case scenario Content development, engineering, and design; new product design, prototypes, testing, production design, optimization
R&D/Alcatel, Deutsche Bank, Nortel, Motorola, SAP, Siemens, Software AG	Software and System Design
SCM/Alcatel	Complete Product Life Cycle and Supply Chain

Table 2 Sample Functions to be offshored by - real world examples - source: Own research

Past performance need not be a reflector of future performance. Nevertheless, it is interesting to see what the offshoring scene has been in the past.

The following countries have been among the largest suppliers of outsourcing services so far:

Country	(2001) in US dollars
Canada	3.80
China	1.10
India	7.70

Ireland	8.30
Israel	3.00
Mexico	0.50
Philippines	0.40
Russia and eastern Europe	0.60

Table 3 Market for Offshore Services - source: McKinsey, GlobalInsitute

C. East and Central Europe

Outsourcing of software development and business services is growing at a fast pace in central and eastern Europe - especially Belarus (more details in the chapter about Russia), Bulgaria and the four largest of the European Union's 10 new members - the Czech Republic, Hungary, Poland and Slovakia. The IT offshore service providers are reporting a growth rate of 40-60% annually. Some of the most well known companies like Epam, Exigen, IBA, Sciart and Softline have doubled their revenues every year since 2000. In 2004 several of these companies had a headcount of more than 1000 and were CMM certified. Multinationals had come into the region during the 1990s to invest in manufacturing and in services from banking to retailing, often through privatisations (Typical examples are Skoda of Volkswagen, Iskratel of Siemens, TietoEnator or in the past IBA by IBM). Now there is investment in service centres designed to carry out work for clients across Europe and beyond.

A typical example, not well known to the public is Belarus: Belarussia, a former USSR member state is operated independent of Russia's government but relies heavily on Russian industry. The city of Minsk as the former Scientist and Defense Contract Development destination, is still a very important talent pool for the Russian petroleum and defense industry.

All over Central/East Europe, thousands of jobs are being created in a wide range of activities including data processing for banks, ticketing for airlines and financial accounting for industrial groups. McKinsey, estimates that in Poland the number of posts in

president for accounting at Lufthansa, says the company in 2003 chose Krakow for its European accounting centre because of the languages on offer. "We even have a person who speaks Finnish," he says. According to a study by EUROSTAT, the

Major Near- and Offshore Destinations: Market Size

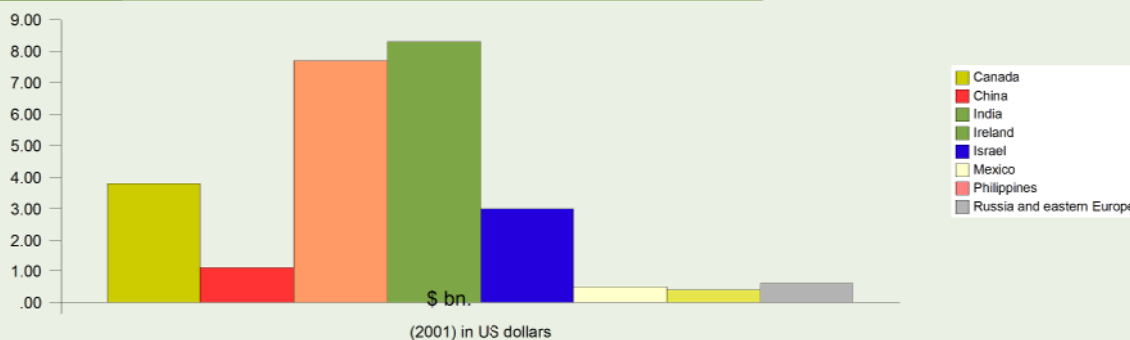


Illustration 7 Major Nearshore & Offshore Destinations and their market size - source McKinsey and Forrester

outsourced business services could rise from about 3,000 in early 2004 to 200,000 by 2008. The Czech Republic and Hungary serve in near-shore roles for German and French companies.

The region is still far from being a global leader like India in hosting business process offshoring. However, having entered the market about a decade after India and China, it is catching up, according to a survey of offshore business process locations by AT Kearney.

Salaries for east European business services workers are about double to three times higher than those in India or China - a considerable disadvantage in a sector where labour often takes a big share of total costs.

But for many continental European groups, a knowledge of languages other than English - including French, German and Spanish - is a key consideration in any offshoring decision. And skills in these languages are much easier to find in central and eastern Europe than in Asia. Klaus Furck, vice-

European Union's statistical office, 70% of the Czech population also speaks a foreign language, being especially proficient in English and German.

Cultural affinity also matters, especially where the service centre staff are required to deal with a group's clients. Particularly sensitive fields include collecting debts from customers and handling complaints. David Poole, vice-president for outsourcing at Capgemini, the French-based consultancy which has a services centre in Krakow, says: "These people are Europeans and understand Europe. There is no need for cultural training."

Geographic proximity is also important for some companies, especially those that require frequent contacts between the service workers and their clients in the west. Graham Underwood, chief operating officer at GFT, a UK-based/German company that has a centre in Budapest and specialises in IT services for investment banks, says being in the same time zone as Germany gives Hungary an advantage over India. "There's no doubt

that central and eastern Europe is a good location for dynamic projects, where there are a lot of exchanges of views with the client."

Central and Eastern European countries are "a good near-shore alternative to India," notes Joseph Franz, manager of the Czech Republic Solution Centre, in Prague, for EDS. These countries are in the same time zone as the European Union and have a similar culture, "which is helpful for onshore-offshore teamwork and collaboration". Besides, Franz says, some of the EU clients are risk-averse, and see their neighbours in Central and Eastern Europe as "a safer, more pragmatic first step in entering into offshore BPO."

The region's role is highlighted by the approach of those companies that carry out BPO for others - including Capgemini, Accenture, the international management consultancy, which has a big base in Prague, and International Business Machines of the US which runs a large services centre in Slovakia and others in Poland, and Hungary. For these companies, the central European services centres fit into global networks, which usually also include India and China. For example, Capgemini runs outsourcing bases in Bangalore (India), Guangzhou (China), Toronto (Canada) and Dallas (US) as well as Krakow. Mr Poole explains that projects are often divided between different centres, with simpler jobs such as data processing carried out in China and more complex tasks involving client contact done closer to the customer.

In these networks, the central European centres often serve west European-based clients. But global links are not unusual. For example, one Texan utility company using Capgemini divides its account management functions between Dallas, Krakow and Bangalore.

A downside is that, if the region's economies grow faster than those of western Europe, as is predicted,

central Europe's cost advantages will decline steadily as wages rise closer to western European levels. The proposed entry of new countries, including Romania and Bulgaria, to the EU later in the decade would increase the competition among low-wage economies in the union. Russia too could emerge as a powerful competitor.

Janet Pau, policy analyst for AT Kearney's Global Business Policy Council, says that there there is likely to be a farther eastward push within Eastern Europe, to countries such as Romania and Bulgaria, as work spills over from places such as the Czech Republic and Hungary. Locations such as the Czech Republic, a country with a population of just ten million, cannot indefinitely ramp up to meet the trained-labour needs of the BPO sector, and some of that work inevitably is beginning to spill over into other parts of Central and Eastern Europe.

Multinational information technology companies already place programming and research contracts as far afield as Novosibirsk in Siberia. Robert Maciejko, who heads the Polish office of the Boston Consulting Group, says: "Now is the time we must market the idea of central Europe as a business services location."

But there are limits to the speed with which west European companies are moving their service centres to the east. Mr Maciejko says that as companies consider transferring more sophisticated functions involving head office executives they become more hesitant. "There's a lot of inertia. Who would put a new headquarters in Germany today [given the costs]? But I do not see many multinationals moving their global headquarters or even their European headquarters to Warsaw." Most Europeans like to live in their own countries.

But as companies expand their operations in the east and more executives spend some of their career in the east, these attitudes may change. Vladimir Kroa,

a Prague-based IT researcher for IDC, argues that the city is already becoming a location of choice even for west Europeans. "They like the lifestyle. They really want to live here - it is such a beautiful place".

D. The Russian Federation

D.1. History & background

As far back as 1725, Peter the Great instituted a state-funded university education policy under the auspices of the Academy of Sciences in St. Petersburg. This Academy has influenced Russia's orientation towards natural sciences (especially Mathematics, Physics and Space) for several centuries. At one time, a million people were employed in this sector and well-known names like Bernoulli and Euler were products of this education and research system. Many Nobel prizes were awarded to Russian scientists: Ivan Pavlov, Nikolai Semenov, Igor Tamm, Pavel Cherenkov, Ilya Frank, Lev Landau, Nikolai Basov, Alexander Prokhorov, Mikhail Sholokhov, Alexander Solzhenitsyn, Leonid Kantorovich, Andrey Sakharov, Pyotr Kapitsa, Zhorez Alfeyorov.

After liberalization, when Russia opened its doors to the West, many research facilities of the armaments industry, the military, KGB, nuclear industry and Space were closed for well-known reasons. The armaments industry, which had long been the employer of most engineers and developers, collapsed. It is estimated that at least 50,000 engineering jobs were eliminated without alternative employment in the Russian Federation alone. This process took place gradually since these terminations were not defined as such, but since salary payments came to a halt, many engineers had to accept reality and embark on new initiatives.

Even the Universities lacked the funds to ensure a practical education. Nevertheless, a University Degree

is still valued immensely: Russia is still considered as having a high ratio of engineers and scientists. The strengths of Russian research institutions and universities however still lie in Mathematics and Natural Sciences. Approximately 50% of university graduates major in one of these subjects.

Not surprisingly, the strength of Russian software developers lies in highly complex mathematical problems. Besides, the focus has moved from the armament industry, KGB and nuclear industry to Security and Communications supported by Embedded Systems. Many of the most intensive hacking attacks in the world have originated from Russian universities – whose students are ideal candidates for designing security systems which can withstand such attacks.

Unfortunately, many highly-gifted scientists of Jewish origin left the country, migrating to Israel in 1989-1992. Official statistics estimate this at over 1 million scientists.

D.2. The IT industry

Employees initially recruited by the Russian Federation's IT industry were from universities and research institutions. Since unemployment had risen dramatically among Russian mathematicians and engineers, the first IT-companies could recruit outstanding developers inexpensively and at short notice. By the end of the 90s, around the time of the Internet boom and the first ventures into offshore locations like India, investors were also available for Russian software companies and offshore development centers. These firms were initially established with several hundred employees but it was soon evident that the size of such firms was too large due to the lack of knowledge of how a market economy functioned. Marketing companies in U.S. and Europe for the offshore development services of these Russian firms could not compete against well-established rivals since they lacked project

management, marketing, and industry sector experience. Many of these companies are either going through an adaptation phase with considerable re-organization over the last two years, or closed down after the initial boom-period in the IT-sector.

The core-competency of these companies lies predominantly in the Unix and PC area, with C and C++ as well as Java development projects. Since the universities cannot afford state-of-the-art hardware like in the West, students are forced to work on their own PC's at home to acquire practical experience.

Information and statistics about Russian suppliers and the IT industry are inconsistent and are based on unreliable data. For example, data on current IT specialists varies between 8000 and 1 million, depending on the intention and purpose of the organization carrying out the study.

There are however 50 medium-sized IT companies, the top 10 each with about 500-1500 employees, and a large number of small to medium sized suppliers. An association has been set up in the Russian Federation under the name of Fort-Russ or RusSoft. RusSoft represents, besides Russian companies, destinations like the Baltic states, Belarus and Ukraine. The list of companies includes:

Russia	City
Aplana	St. Petersburg
Arcadia, Inc	St. Petersburg
BCC SoftLab	St. Petersburg
Contek Software	Tomsk
IBS-Group (Luxoft is part of IBS)	Moscow
iDeveloperNetwork	Moscow
incap Inc.	Yaroslavl
intelligence soft	St. Petersburg
INTERIN Lab.	Yaroslavl Reg.
Russian Academy of Science	
Krista Information Technologies	Rybinsk
Luxsoft (IBS-Group)	Moscow
Media Art	Rostov on Don
Megaputer Intelligence Ltd.	Moscow
Miratech Ltd.	Kiev
NAUMEN Corporation,	Ekaterinburg
RBC SOFT	Moscow
Reksoft Co. Ltd.	St. Petersburg
Spirit Corp.	Moscow
Tacklesoft	Novosibirsk
Vested Development Team Inc.	Moscow

Table 4*Source: Fort Ross / Russoft

Baltic IS Cluster	City
A/s DATI (Dati Group)	
Lursoft	Riga
Microlink	

Table 5*Source: Baltic IS Cluster

There is a formation of the Baltic IS cluster on the way, which will start to promote this region's members. It seems there will be a new trend of independent, newly formed marketing associations for the different nations:

Belarus	City
Altoros	Minsk
Epam	Minsk
IBA	Minsk
itransition software division	Minsk
Logic Software Development	Minsk
ScienceSoft Inc.	Minsk

Table 6*Source: Association of IT Developers Infopark

At the end of 2004 the IS cluster for Belarussia was formed, but so far it is not really operating as an international marketing agency.

Ukraine	City
DDLabs, Inc.	Kiev
Eleks Software, Ltd	Lviv
GTech Ukraine Limited	Kyiv
International Land Systems – ILS Inc.	Kiev
KP VTI	Kyiv
Logjs	Kiev
Mega Businesss Software	Kharkov
PNN Offshore Team	Kiev
SoftServe, Inc.	Lviv
Telesens LLC	Kharkov
Tessart Inc.	Kyiv
The KIT Group Ltd.	Kharkov

Table 7*Source: Ukrainian High Tech Initiative

The Ukraine High-Tech Promotion Council is very actively promoting it's members on their website, but it is still relatively unknown in the internataional markets.

D.3.IT services for offshoring

In the boom-phase of the New Economy many sotware companies were established in Russia and the former USSR States. Their strengths were

predominantly in PC tools, operating systems, complementary add-ons and security-products.

In the 2nd phase of the outsourcing era, Russia too began to play an important role as an offshoring destination. Turnover estimates in 2003 ranged between Euro 150 - 200 million for this export segment, with annual growth rates till the present being 60%.

The high standard of education and the low labour costs have encouraged many international companies like Motorola, Intel, Sun, Boeing and Nortel to establish offshore development centers in the Russian Federation.

The result is the setting-up of spinoffs and sub-contracting firms, adaptation to western business practices and ISO and CEI certifications.

E. Central Europe: Poland, Czech Republic, Slovakia, Hungary and Turkey

See our White Paper on central Europe!

F. China

The huge "Middle Kingdom" has been talked about nearly everywhere for the past few years – especially for the impressive growth of its economy. China will be on par with Germany in terms of gross national product within a few years; and Germany, according to many forecasts, will lose rank in the industrialized world within 5 years. If China maintains its growth rate of the past few years, it will overtake even the U.S. in two decades. Today, China attracts more foreign investment than Germany; it is preceded only by the U.S. and U.K.

China's basic strengths are readily available human capital, a highly educated and motivated workforce

of technology-savvy young people, and a supportive government that is actively promoting technical, English-language, and project management education and training.

China's population of PC, Internet and cellphone users is several times India's. Its domestic market for IT (estimated at almost \$40 billion by 2005) is much larger than India's (\$15 billion by 2005). It is the third largest IT hardware manufacturer in the world, and its telecommunications sector has attracted billions in investment.

The Chinese government is committed to the IT sector. It has carefully crafted taxation, investment and funding policies, made heavy investments in software centers around the country linked to major universities, and adopted policies to encourage English-language usage and enhance domestic competitiveness. The number of engineering graduates and software-applications professionals has grown considerably in recent years.

According to a 2004 Mckinsey report, the number of English-speaking graduates in China's workforce--particularly crucial in software outsourcing--has doubled since 2000, to more than 24 million. However most IT professionals are more comfortable with reading English than speaking it.

Chinese universities are encouraged to strike R&D alliances with leading international companies and universities. China has aggressively pursued a strategy that requires foreign firms to transfer technology and form alliances with domestic companies in order to do business in the country.

There are downsides. There is a shortage of experienced project workers, particularly project managers. These people are being recruited from Hong Kong and other parts of the Asia-Pacific region.

A study by India's software services association, NASSCOM, highlighted that China seems to be stronger than India in national and industry focus, and in bandwidth and hardware costs, while the two countries are about equal with respect to costs of manpower and real estate. India is stronger than China in resource availability, quality processes, software methodologies, and skills, such as in project management, language, and customer relationships.

The significance of the Chinese economy for Germany is best reflected in the imports from China. Chinese imports into Germany are half of those from France and equal to those from Switzerland. (2002, Federal Bureau of Statistics)

China is attractive as a software development location from many points of view. Apart from outstanding engineering, it also has a huge and receptive domestic market. The local market for IT and communications in China are currently growing three times faster than gross national product. This represents a huge economic potential. Many firms have thus established a base in China not only to procure affordable services but also to penetrate the domestic market.

The following list elaborates this fact:

Branch	Company	Staff	Activity
Financial Services	HSBC	2500	Credit Cards
	Oracle	500	Software
Software	Computer Associates	1500	Development
	Microsoft	200	Research and Development
Hardware	Sun	500	Research and development
	Philips	700	
Engineering Services	General Electric	3000	Accountancy
		150	Development
Consumer Goods	Procter & Gamble		Accountancy

Table 8*Source: Own Research and press releases

China still has a state-controlled economy, and even the modern software industry is influenced by the Communist “planned economy”. Measures are being undertaken to cast aside this corset and grant companies more independence and rights but to the Western eye it is still difficult to recognize the boundaries.

The available statistics are, besides, politically influenced and often out-of-date. It is therefore relatively difficult to present an objective picture of the economic scenario.

F.1. IT software & services for export

Since 1997, China's annual revenue in software and IT services has risen by 42 percent a year, on average, reaching \$6.8 billion in 2003.

In 2001, China exported high tech products valued at approx. 34 billion Euro of which software related products comprised only 750 million Euro. China still imported software and related services. This is due to the very strong chip and hardware based industry, and the “extended workbench” adopted by many high-tech companies who develop their products in their own countries and manufacture them in China.

For a long time Beijing tried to resist international networking (globalization), which is definitely one reason why offshore business has developed slowly.

Current providers of offshore development services are medium-sized organizations with 20-300 employees. To the best of our knowledge, there are no companies with several thousand employees. These companies are now attempting to organize themselves into associations or cooperatives so as to be accepted in international markets. A typical example is SOBUS, a union of Chinese IT-companies

in Shanghai, which claims to employ 4000 developers. It consists however of about 40 individual companies which have associated in order to appear as a single enterprise. The client list of these companies is strongly influenced by the domestic market and linguistic abilities in English are only intermittently available.

The expertise of these companies is strongest in the PC-field with programming languages and environments like Visual Basic, Delphi, Access, SQL-Server, and to an extent also the Unix environment with DB/2, Oracle and Sybase. Various Web technologies from the Open Source area are also supported.

Only very few providers use development tools or are ISO or CMM certified.

Some of the best Chinese software talent is utilized by foreign direct investors in high tech firms and the chip industry. Development services for chip design, ASIC programming, circuit board layout, and driver development are of particular importance. Offshore software development has been able to establish itself as an independent business sector only in the last two years. The main focus in this area is the development of PC tools, drivers and technical systems. Since Chinese companies have few requirements for classical back-office systems, the supply for such systems lags far behind that in other countries. Large database applications such as data warehousing and data mining are definitely not the strengths of these companies. The language and cultural differences is another factor. Since this segment of the software industry does not yet have the necessary credibility from the economic point of view, no statistics are available.

Many potential clients have been frightened off by the thought of their intellectual property rights being “violated”. It was only in 2002 that China, after joining the World Trade Organization, agreed to

abide by international regulations and enforce them domestically.

Another important impediment is the lack of well-qualified engineers. Admittedly, China has made strenuous efforts and has had its share of successes in recent years in increasing the availability of entry-level software engineers to 60,000 per year. One should add to this about 35,000 Chinese students in Europe and USA. Compared with India however, the numbers are still small.

Over the past two years, the Chinese government has undertaken several measures to remove these stumbling blocks. Apart from joining the WTO, it has initiated cooperation with institutions like ISO, aimed at creating a culture of quality control and improvement. The Chinese Ministry for Information Technology and Ministry for Foreign Trade are implementing a five-year plan (started in 2000) to set up a national IT-software industry, with the support of USITO (an organization involved in the promotion of exports of IT products and services) and CSIA (the Chinese association of the software manufacturers).

Looking at China's software industry in 2004, McKinsey found many weaknesses. It felt that the Chinese must consolidate their highly fragmented industry to gain the size and expertise needed to capture large international projects. "Currently, there is little movement in this direction".

"To compete effectively in global outsourcing, China's software industry must consolidate. But shortcomings in the structure of China's IT industry prevent it from taking full advantage of these changes. Although revenue from IT services is rising, it is barely half of India's \$12.7 billion a year. Growth is driven by domestic demand—most customers are small and midsize Chinese enterprises that want their software customized to their own needs. Moreover, the country's nascent foreign-software-

outsourcing business accounts for just 10 percent of the industry's total revenue, compared with around 70 percent for India".

McKinsey found that Japanese customers, who seek mostly low-value application-development contracts rather than more lucrative ones for design, supply about 65 percent of China's software sector's income. And despite lower costs, operating margins in Chinese software-services companies average only 7 percent, compared with 11 percent at similar companies around the world, because many projects are below optimal scale, suppliers often compete on price, and collecting payments can be problematic.

To compete effectively in global outsourcing, China's software industry must consolidate. The top 10 IT-services companies have only about a 20 percent share of the market, compared with the 45 percent commanded by India's top 10. Furthermore, China has about 8,000 software-services providers, and almost three-quarters of them have fewer than 50 employees. No company has emerged from this crowded pack; indeed, only five have more than 2,000 employees. India, on the other hand, has fewer than 3,000 software-services companies. Of these, at least 15 have more than 2,000 workers, and some—including Infosys Technologies, Tata Consultancy Services and Wipro Technologies—have garnered international recognition and a global clientele.

Fragmentation exacerbates the Chinese industry's other problems, including weak process controls and product management. Only six of China's 30 largest software companies are certified at levels five or four of the capability-maturity model (CMM); by contrast, all of the top 30 Indian software companies have achieved these rankings. About a quarter of the Chinese companies McKinsey surveyed are trying to implement the CMM quality standards, but more than half of the companies in the survey said that such efforts weren't necessary, feasible or worthwhile. And only about 12 percent of Chinese

software-services providers see mergers, acquisitions and alliances as a priority.

Managers in China have little M&A experience, and although the culture tends to favor organic growth, relying on it to counter new competitors isn't realistic. Meanwhile, several Indian companies are considering acquisitions of Chinese firms to expand their operations.

Chinese software-services providers will also have to manage their talent much better. Most do little to develop their employees, and very few use stock options, training programs, or other incentives to build talent. Among the companies in the McKinsey sample, annual employee turnover was about 20 percent, compared with an average of 14 percent in the United States, which itself has a very fluid IT labor market.

G. India

India is not only the best established offshore sourcing supplier worldwide but probably the oldest and largest. The top Indian suppliers not only have the experience, but their approach and models are based on thorough study and research. Besides, the available data on India are wide-ranging, which is another reason why India is comprehensively treated in this analysis.

A study of the development of India as a software location would show how rapidly the industry has developed there in the last ten years, and the short time frame within which planning for the industry's development took place (compare this with the laborious, wary preparation and planning of changes and long-range investments in Europe, especially Germany). Globalization has transformed benefits into reality for all concerned - India as a provider, the suppliers, and the customers in developed countries.

We base the above on studies conducted by IBM BCS, Aberdeen, Forrester and NASSCOM, (the Indian association of software and service providers).

Some examples of projects are listed below:

Branch	Company	Staff	Activity
Financial Services	Axa	4000	Administration, Customer Care, IT und Data Entry
	ABN Amro	3000	Research, Marketing, Customer Care, IT
	HSBC	2000	Payment Processing Payroll Operations
	American Express	1000	Payment Processing
	Conseco	1700	Processing of Claims
Consumer Goods	Procter & Gamble	N.A.	Software and Payment
Chip Production	Intel	3000	Chip Design und Technical Support
	Philips	500	Chip Design und Technical Support
	Infineon	N.A.	Software development
Software	Microsoft	500	Software Development and support
	Oracle	4000	Software Development
	Philips	1200	
	Siemens	3000	R&D, Software
	Computer Associates	very recently started	IT-Services
	IBM	Start	Software Development
	EDS	N.A.	IT Services
	Machinery	Gildemeister Deckel-Maho	N.A.
	Claas	1000	R&D, Assembly, IT Services
Telecom Provider	British Telecom (joint-venture with Mahindra: MBT)	3000	Finance, IT-Support,
Infrastructure Engineering		N.A.	IT-Services and Back Office
Logistics	Eurokai	800	IT-Services and Back Office
	Lufthansa	1500	Back Office and Ticketing
	Arvato (Miles & More)	300	IT-Services and Back Office
Medical Equipment	General Electric	1000	R&D for Medicine, lighting and Flight systems
	...	N.A.	Research and Development
	Philips	1000	Analysis
Consulting	KPMG	1000	Analysis and Backoffice
	Deloitte & Touche	1200 (5000)	Analysis and BPO services
	Accenture	800 (200)	Analysis

Table 9*Source: Own Research and press releases - Label: (in paranthesis) planned for 2005 and onwards

G.1. History and background

As far back as the 1980s some multinational companies established offices and IT divisions in India. German companies like AEG, Claas, DMG (Deckel-Maho-Gildemeister) and Lufthansa all have a presence in India. The same is true for other European multinationals, like ABN Amro, AXA, British Telecom, Philips, UBS. Siemens has many decades of experience and many divisions with a presence in India (ICN, Infineon, VDO). However, before the economic liberalization of the 1990s (which ended the Soviet-influenced planned economy), many foreign companies were nationalized, taken over or expelled from the country.

After the opening up of the Indian market in 1990, the first western pioneers, initially the big American multinationals and British firms, began establishing their facilities. Companies like British Airways, Citigroup, Citibank, American Express, and General Electric set up offices in Bombay, Delhi and Bangalore. Even major Swiss banks and Swissair had their software developed and their tickets recorded and printed in India. These companies paid a very high risk-premium and were prepared for a long-term learning curve since they recognized the potential of the Indian work-force very early. Today, we profit from their experiences and approach due to their:

- ▶ Setting up big centers with standardized quality norms of processes and training the work force into this work ethic and mentality
- ▶ introducing the concept of working in shifts and, if required, 7x24 hour service
- ▶ transfer of our western, industrialized work ethic, with equal opportunity employment rights and respect for the rights of the employee

- ▶ creating an acceptance of this strategy within their own companies, employees and stock-holders
- ▶ influencing the political environment in India, and with it the required legal framework (which did not exist in India at this stage)

IBM has described a 3-Phase Model in a study [IBM BCS]:

I. Phase: Early Adaptors (1996-2000)

II. Phase: Increasing Adopters (2000-2002)

III. Phase: Bandwagon (2003-2008)

i. Phase

This, as we have seen, was when many MNC pioneers set up shop, and helped to create a business climate favourable to offshoring

ii. Phase

During this phase, to European companies the risks of moving offshore and outsourcing to India had become well-defined and controllable. The infrastructure was considerably developed by individual federal states, (expansion of a good mobile / wireless network that covers all metropolises today, connectivity to the big internet backbones, introduction of fast and regular flight-connections, financial support to universities, construction of modern trade, and office-complexes) Companies like Infosys were listed on the international stock exchanges. The political environment encouraged liberalization and opening up of the markets so that, for example, an insurance company like AXA could enter the Indian market in collaboration with the Guardian Royal Exchange. In this manner they not only gained access to the Indian insurance market,

but could also outsource IT and administrative tasks to India. In a relatively short time, they acquired access to domain-specific know-how and local market knowledge.

Many "Early Adopters" who took the first tentative steps into India with pilot projects in Phase 1, then decided to risk the big leap. Citigroup started developing software in India in a joint venture, and then set up a wholly-owned subsidiary. Companies like Ford, HSBC, Siemens (SISL, ICN, VDO, Infineon Technologies, R&D Center in Bangalore), and Microsoft built their development centers in India to strengthen their ability to compete in international markets.

From 1998 onwards, some of the "smaller" companies (with a few hundred employees) and larger software companies from the USA began to establish their software development facilities in India. Among them were firms like Axes Technologies, JP Mobile, SDRC (CAD/CAM software IDEA - one of the leading suppliers worldwide in their segment, and later taken over by EDS) and Oracle.

2002 witnessed the beginning of an important process of consolidation. For the first time, Indian IT companies were faced with serious competition (Suppliers from Cyprus, Israel, and eastern Europe penetrated the market with competitive pricing as a result of which prices and profit margins fell. Besides, the economic situation worsened). Growth rates levelled off drastically and new projects could no longer be won with an "on-the-fly" cowboy-mentality.

However, the strong reverse-flow of Indian employees and students from the USA and Europe back to India, further strengthened the western, industrialized business mentality in India. This contributed to strengthening quality and increasing competitiveness through flexibility and improved cost structures.

iii. Phase

In the meantime a strong industry emerged. Indian full-service providers had been working successfully for several years mainly for the American (65%) and English (20%) industries. After overcoming the generally known teething problems from the 2nd Phase like differences in mentality, differences of opinion about methodology, quality and adherence to schedules, and also the classic, so-called "system-inherent" problems like lack of communication between the partners (refer to our papers and Workshops on the subject of Outsourcing or sources like [Aberdeen], [McKinsey Nasscom], [Hughes], or [Website Globaloutsourcing.org] and [Website Outsourcmethods], a tried and tested Business Model emerged here for suppliers and customers. The statistics speak for themselves - the Indian suppliers have developed a distinctive self-confidence and work with their own specific models and methodology. One is proudly shown - the CMM, Capability Maturity Model, jointly-developed with the Carnegie Mellon University for quality-oriented methodology in outsourcing (refer to our white paper [uniWPCMM]). This quality standard has been accepted by all big IT providers today and interestingly a large percentage of certified suppliers are located in India. This substantiates the high acceptance and quality-standards of the Indian suppliers.

G.2. Some factors behind India's IT industry growth

Ten years ago, there were only a few offshoots of the big multinational companies, their spin-offs, and some small start-up's established by Indian entrepreneurs who had earned their initial seed-capital in the U.S. and then returned home. The education of Indians in the U.S. benefited the Indian software industry. In addition, the good networking of the Indian alumni at the top American universities

played a major role in enabling the Indian firms to gain an early foothold in the U.S. Good networking, an understanding of the American business world, good knowledge of the internal procedures of American companies, especially technical aspects like the use of many different application systems and technologies, helped the pioneers in their entry into the industry, which quickly developed into a truly important industrial sector in India. Surveys claim that some 60-70% of American software has been developed in India.

This naturally raises the question, as to what distinguishes the Indian suppliers from others? Suppliers from China, eastern Europe and the former USSR have only recently entered the marketplace. They are not as well-established and thus do not have the infrastructure, financial strength, size, methodology and project experience to compete against the sometimes more expensive suppliers from India. These highly technical and academic-oriented firms frequently lack an insight into the industry, and a fully-mature infrastructure. Quality standards too are far from being fulfilled.

Together with the Carnegie Mellon University, the Indian software industry developed the so called Capability Maturity Model (CMM). See [uniWPCMM]. In addition to the well-known existing ISO-Certification standards, this quality standard is awarded at different Levels and differs from certification by the ISO, in that it lays down specific points and requirements concerning the implementation of projects in software development and other services. The objective of CMM is, in particular, the establishment of balanced and tested lines of communication between the customer and the supplier. The result is a transparent organization and methodology which can be repeatedly utilized for maximum optimization. These business fundamentals applied to software development ensure a very high rate of success and an acceptance of the execution of awarded projects.

The results are standardization and consistency of the individual production processes in the field of software development - at the highest level of quality in the sense of industrial production. An increase in output and efficiency of the processes thus results in a reduction in total costs.

G.3.IT industry size and location

The IT industry in India therefore became the fastest-developing industry. This growth, though, has dropped off during the past two years, especially if the data are expressed in Euro (which has risen against dollar). Even so, the industry's growth by 4.3 times over the 5-year period to 2003-04 provides a case study of how successful Indian companies have been in adapting themselves to the demands of the industrial countries.

The following chart (Source: NASSCOM) gives the software/service industry's growth in export turnover. These figures add up to about 20% of India's exports, which explains why top priority is given to development of this sector.

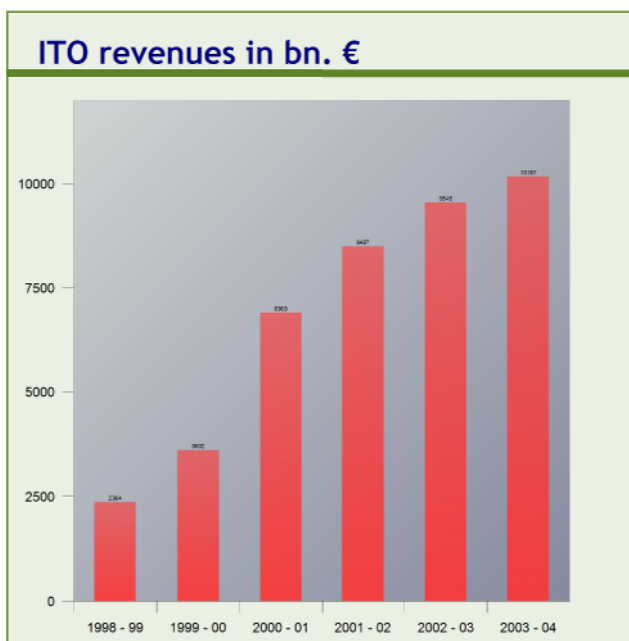


Illustration 8 ITO revenues - source NASSCOM/McKinsey

The industry has widened the scope of its offerings during the last few years. Initially, Indian companies offered mainly programming services, mainly PC, UNIX and Windows, like East European suppliers are doing today. However, since big companies and clients have to support a wide range of systems, engineers and programmers were trained on Mainframe, AS/400 and various development platforms. The growing trend towards standard solutions - with the development of software supported by 4-GL and Case-Tools, as also the migration towards standard software like Great Plains (now Microsoft), J.D. Edward (now Peoplesoft), Navision (now Microsoft), Peoplesoft, SAP and others - was quickly supported by the Indian suppliers and many successful projects have been executed. These have proved the state-of-the-art abilities of Indian outsourcers and consultants. Today, IT business consultancies from India have also acquired an international reputation.

The IT market in India can be divided as follows:

- ▶ IT software and services for export
- ▶ IT enabled Services for export (ITES or Business Process Outsourcing, BPO)
- ▶ Domestic market for IT
- ▶ Telecommunications Infrastructure
- ▶ Classical Consultancy Services
- ▶ Venture Capital

The most prominent locations/cities beside the well known industrial centres of Bombay, Calcutta or Delhi as the capital are (based on figures from 2004 in billion €):

Area	Sectors	Revenue	Population (m)
Bangalore	Software Engineering, Finance and Communication Industry, Pharmaceutical, BPO & Callcenter services	3 bn. 1 bn.	4.3
Chennai	Software development and Engineering services for the automotive sector	2 bn.	
Kolkata / Calcutta	Software development for old economy industry, logistics BPO & Callcenter services	1 bn. 0,6 bn.	4.2 13.0
Noraida	Software	1 bn.	6.0
Hyderabad	Software, Biotech, Pharmaceutical and Callcenter	1 bn.	5.0
Mumbai / Bombay	BPO and Callcenter services for financial sector	0,4 bn. 0,6 bn.	12.0
Pune	IT for automotive	0,3 bn.	3.0

*Source: Own research, Census of India 2001 – Office of the Registrar General and Business Today, 2004

Advantages and strengths of Indian IT software and services providers:

- ▶ Excellent command of English which enables easy communication
- ▶ Good education, and a big pool of key personnel
- ▶ Diverse experience and backgrounds, with extensive sector-specific know-how from American and European industries
- ▶ Expertise in relevant technologies
- ▶ Adaptation to the highest quality industry standards: ISO and CMM Level 3 to 5. The last of these has not even been introduced or practised in Germany till date since German suppliers have been scared off by the extremely stringent requirements.
- ▶ Excellent project management, -controlling and -monitoring, especially in execution of large projects (experience and case studies of projects of half the top 1000 firms like Citigroup, Deutsche Bank, DaimlerChrysler, Porsche, British Airways, Lufthansa, Swiss, Philips, Siemens, BMC, Computer Associates, Microsoft)
- ▶ Proven track record of adherence to budgets and time frames. (a recent survey of US clients yielded an average grade of a 2+)
- ▶ A very attractive and convincing price-structure – savings of up to 40-60%.

G.4. The major Indian companies and their strengths

Most of the major Indian suppliers, (between 10-25, based on the definition), are listed on NASDAQ and have done well even in times of recession. For Germany, the larger suppliers are interesting, starting with companies with a few hundred employees, going up to companies like HCL, Infosys, Satyam, Tata and WIPRO with workforces of 10,000 or more. These "key players" began the globalization process several years ago and operate very successfully today in many countries around the world. In continental Europe, like in France and Germany, by contrast, this market is just about beginning to develop.

Currently, the lion's share of Indian exports is generated by this sector. Approximately 10 billion Euro is exported by the Indian IT software and

services industry today. After the lowering of growth rates following the “slump” in 2001, the sector adapted quickly and pragmatically to the new environment. Some 65% of exports go the USA, 25% to Europe and 10% to the rest of the world (see Chart).

Revenues from Europe are dominated by those from the U.K.:

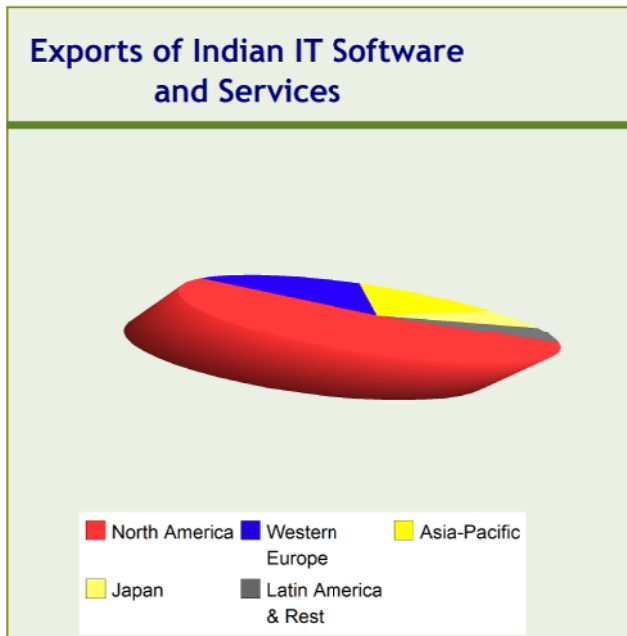


Illustration 9 Exports of ITES by India - source: NASSCOM 2004

Western European Member State	Percent of Exports to Western Europe
United Kingdom	63
Germany	13
Belgium	8
Rest	16

*Source: [ESC-StatYearBook03]

We give below data on the top 10 Indian suppliers ranked by their revenues of 2002/2003 (Nasscom data. 1 crore=10 million and 50 Rs correspond to appr. 1 €).

Please keep in mind that from the Western World point of view, these revenues don't look very high. But low cost suppliers charge much lower hourly rates in comparison to the Western world, so you should multiply the figures by a factor of 4 for a meaningful view.

Company Name	(Rs. Crore)	(US\$ Mio.)	(€ Mio.)
Tata Consultancy Services (only TCS see. No. 22!)	4.545,30	999,97	790,43
Infosys Technologies Ltd	3.543,50	779,57	616,21
Wipro Technologies	2.787,40	613,23	484,73
Satyam Computer Services Ltd	2.003,30	440,73	348,37
HCL Technologies Ltd	1.530,50	336,71	266,15
Patni Computer Systems Ltd	914,00	201,08	158,94
Mahindra British Telecom Ltd	634,70	139,63	110,37
iFlex Solutions	593,30	130,53	103,17
HCL Perot Systems Ltd	449,00	98,78	78,08
NIIT Ltd	426,30	93,79	74,13

*Source: Nasscom, Business Today, Press Releases

More recently, Tata Consultancy Services announced that it had topped US\$ 1 bn in revenues. It came out with a successful IPO at the end of 2004.

To give you a better understanding of the market size and an overview of the largest suppliers, we list the Top-50 companies, ranked in 2003 by Dataquest:

Rank	Company	CEO	Rev. Mio. €
1	Tata Consultancy Services	S Ramadorai	982,80
2	Wipro		819,40
3	Infosys Technologies	Nandan M Nilekani	724,60
4	Hewlett-Packard India	Balu Doraisamy	648,20

5	IBM India	Abraham Thomas	414,20
6	Satyam computer services	B Ramalinga Raju	404,80
7	HCL Technologies	Shiv Nadar	0,00
8	Tech Pacific India	K Jaishankar	344,20
9	Intel India		334,60
10	Redington India	Jitendra Kulkarni	321,80
11	HCL Infosystems	Ajai Chowdhry	284,40
12	Samsung		279,00
13	Ingram Micro	NY Prasad	272,00
14	Cisco Systems	Manoj Chugh	253,60
15	Moser Baer		207,80
16	Patni Computer Systems	NK Patni	193,20
17	Microsoft Corporation India		0,00
18	NIIT		176,60
19	Mahindra British Telecom	John Helleur	123,00
20	CMC		0,00
21	Oracle India Development Centre		118,40
22	Sun Microsystems	Bhaskar Pramanik	116,40
23	i-Flex Solutions	Deepak Ghaisas	113,60
24	Electronics Corporation of India	VH Ron	108,00
25	Cognizant Technology Solutions	Lakshmi Narayanan	105,60
26	American Power Conversion (India)		100,40
27	Microtek International		96,00
28	Tata Infotech	Farrokh K Kavarana	92,40
29	HCL Perot Systems	CP Gurnani	89,80
30	Mphasis BFL	Jerry Rao	85,80
31	Polaris Software Lab	Arun Jain	85,60
32	Digital GlobalSoft		84,40
33	I-GATE GLOBAL SOLUTIONS	Gerhard Watzinger	84,20
34	GTL	Manoj Tirodkar	77,20
35	CMS Computers	RD Grover	76,20
36	Mastek	Ashank Desai	75,60
37	Birlasoft	CK Birla	69,80
38	Celetron India	ML Tandon	68,80
39	SSI	Kalpathi S Suresh	64,80
40	Aptech Training	Pramod Khera	64,00
41	Rolta India	Kamal Singh	61,20
42	SES Technologies	PK Krishnaprasad	60,20
43	Datacraft India		57,60
44	HP (India) Software Operation		57,00
45	Siemens Information systems	Anil R.Laud	54,60
46	PCS Industries	AK Patni	54,00
47	Texas Instruments (India)		54,00
48	L&T Infotech		53,60
49	Hexaware Technologies	Rusi Brij	52,80

Table 10 Ranking of the Top-50 Indian Suppliers - source: Own research 2004

G.5. The IT-enabled services/BPO segment

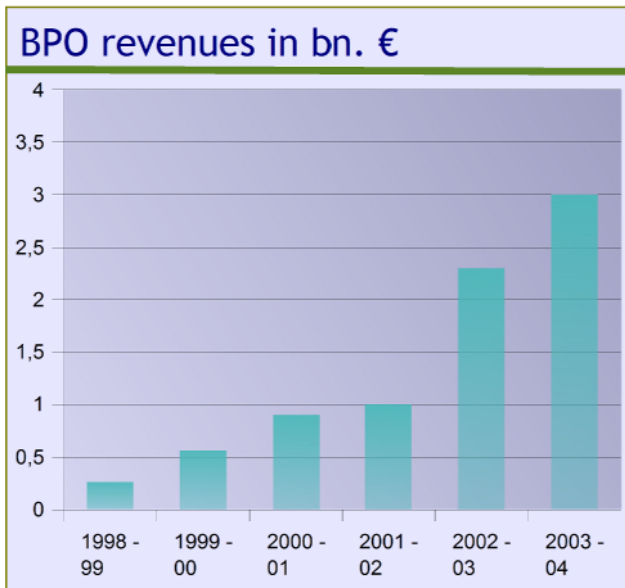
This segment includes all business processes that are labour-intensive and well suited for remote execution. India has placed special emphasis on ITES, which includes services which can be processed remotely via the electronic media. For example:

- ▶ Recording of insurance policies
- ▶ Payroll processing
- ▶ Call centers
- ▶ Hotline and support (English)
- ▶ Design and maintenance of Websites
- ▶ Preparation of content (English)
- ▶ Translations
- ▶ Designing of electronic circuit boards
- ▶ Creation of libraries and data for e.g. electronic components

These are only a few typical examples. This market segment is has a turnover of approximately 3 billion Euro (see Chart) although the development here is more dynamic than in the pure IT market. The estimated turnover for 2008 is a minimum of 15 billion Euro.

In this segment too India has strengths. Some of these are:

- ▶ High qualifications and good knowledge of English
- ▶ Good reputation for their dedication and quality of work
- ▶ A motivation to acquire a command over languages. German is gaining popularity too



The communications infrastructure for these services can be classified somewhere between adequate and good, and has achieved a standard as high as China's. Initiatives are under way to strengthen the country's competitiveness in this segment in future. These include improvement of the existing infrastructure, setting up high-security centers, and construction of modern office-business complexes)

The Indian Government is firmly committed to supporting and promoting this industry, in view of its attractiveness from the point of view of investments.

Please keep in mind that from the Western World point of view, the industry's revenues don't look very high. But low cost suppliers charge much lower per-hour rates compared to Western levels. To get a proper picture of this Indian industry's importance one should multiply the revenue figures by a factor of 4.

TOP 15 Call Center & BPO Supplier

Rank	Company	Rev. € Mio.
1	GE Capital International Services	
2	Wipro Spectramind – WSM	43,48
3	WNS Group (BA & Warburg)	
4	Dell International Services	
5	Daksh e-services Pvt Ltd	40,05
6	eServe International	
7	Accenture	
8	American Express (India)	
9	ExService (I) Pvt Ltd	24,71
10	Scope International	
11	Vcustomer	
12	HSBC Electronic Data Processing	
13	Global eBusiness Operations (HP)	
14	HCL Technologies BPO Services Ltd	24,71

Illustration 11 Callcenter service providers - source: Own research 2005

H. Ireland

H.1. Initial industrialization of the “Emerald Isle”

For many years Ireland struggled to attract industries, and for several decades considerable investment incentives and tax saving schemes were introduced so as to lure heavy industry to relocate to Ireland. Information and statistical data on Ireland is easily accessible from the Irish Development Authority [IDA].

Initially, large multinationals like international chemical companies located here. They valued the flexibility of the politics, the extremely favourable tax structure and the affordable work force. Ireland had the most favourable cost structure in EC at the time and in contrast to Spain and other countries, the workforce speaks English, making communication very easy, then and now.

The success of these relocations was quite evident even after considering the relatively high prices paid, since Ireland was then a country with very

liberal environment protection and labour laws. This however changed during the 90s.

H.2. Chip, software and ITES companies enter

Beginning from the mid-80s and 90s, the high-tech industry brought the Irish the desired growth rates and relocation success stories. Big American chip companies (not merely from Silicon Valley but elsewhere in the U.S. also) and later even software companies located here. They established their European logistics centers and production facilities on the Emerald Isle. The culture, language and relocation costs were suitable and acceptable to American investors.

Today Ireland is one of Europe's favorite locations for contact centers and helpdesks. However, as the economy has improved, Ireland's wages and costs have increased, particularly in Dublin. There are pockets of unemployment in other Irish cities, where costs are much lower than in Dublin. Northern Ireland, a locale used by many European companies for call centers, enjoys wages as much as 25% lower than those in the U.K.

H.3. IT software & services for export

The new facilities originally intended for international software firms were gradually extended to other income-intensive activities, and the German automotive industry relocated to these "production" and logistics centers. In addition to hardware, many suppliers set up software processing also. This led to further strategic relocation decisions which benefited the island. Ireland is today the stronghold for customization and localization of software products for European countries. As a result, in Ireland there is more processing and customization of software than software development. Some 10% of the total value of exports from Ireland are classified as

software products. In a study [Aberdeen] it was estimated that 60% of this value was generated by 10 of the world's largest software suppliers. There have been many start-ups in this area, which thus makes Ireland the ideal outsourcing location for customization of application software to individual countries and languages.

Ireland thus offers software manufacturers the necessary resources for customization and localization of their products to local European requirements (registration, taxation and legal) as well as customer support in the various European languages through call centers or e-mail management centers.

Many European call centers are based in Ireland and run by agencies with excellent skills in European languages (German, French, Spanish and Italian).

I. The Philippines

The Philippines has a large pool of well-trained and motivated workers. With approximately 83 million people, the Philippines is emerging as an aggressive competitor to India. Its strongest points are that its people speak English and Spanish; its labor costs are low (about the same as India's); and the telecommunications infrastructure in Manila is more stable than many cities in other underdeveloped countries.

On the downside, the Philippines is considered by some as politically unstable, with terrorism from Islamic separatists and other factors causing political unrest.

VIII. 3A's IT & sourcing advisory services

A. Offshore projects and strategy

The growing trend in Europe towards offshore outsourcing is promoted by various institutions.

3A-Strategy offers Workshops, Seminars, Market Research in the form of individual studies and project-based consultancy. Our extensive curriculum of inhouse workshops can be customized to meet your enterprise's needs. 3A's inhouse workshops are developed and presented by its Senior Consultants: the value of disseminating cutting-edge ideas, methods, and skills to your team straight from their source is incomparable.

Since the number of providers from various countries has increased, (Business Week, 18 February, 2003), we would like to assist you in your decision making and provide you with the required information. Most of the providers are currently located in eastern Europe, Russia and India. Additionally, there are also providers in Dubai, Israel, and South Africa.

A thorough understanding of the business, culture, goals, vision and history of our client is essential for effective co-operation. In order to have an in-depth understanding, we initially do a thorough analysis of the relevant applications in daily business and the project requirements of our clients. We evaluate all the existing information. Some areas can be excluded from outsourcing at this stage. In the resulting report, we give our recommendations and assist the client in decision making and identifying which areas are suitable for outsourcing. We then work out with the client the strategy and eventual implementation of outsourcing projects.

We create a checklist based on the client and project requirements. During the project, we undertake the project management as well as controlling and monitoring functions in accordance with the clients' requirements to provide smooth execution. Our checklist could, for example, include the following criteria:

- ▶ Domain and Project Experience
- ▶ Communication Facilities
- ▶ Project Management
- ▶ Reliability (Time and Budget)
- ▶ Quality (Documentation, Testing and Standards with reference to security and delivery)
- ▶ Confidentiality
- ▶ Size and Financial Strength

3A-Strategy utilizes a very extensive database which has more than 1000 updated entries currently.

Many of these have already been analysed intensively by us for their technical abilities and reliability. Our database includes 3500 providers from Arabic countries, China, India, eastern Europe, and Spain.

During a project, 3A-Strategy undertakes Project Management, Controlling and Monitoring, in accordance with the clients' and partners' requirements to ensure smooth execution and delivery.

B. Software Project Management

3A-Strategy's Senior Consultants will customize a project management consulting engagement for you. Components of this engagement may include measurement and metrics, estimation techniques, risk management, scheduling and tracking.

C. Project Estimate based on Functional Point Analysis

Software management has been a blend of art and science. The science aspects come from the application of mathematics and formulae to derive an estimate for the proposed work. The art aspects come from the fact that judgment and experience are key elements that determine a successful estimate.

Function Points have been implemented by us successfully in organizations around the world.

D. Project Management Performance Consulting

Whether you want to set up a "walk-in clinic" and bring in a Senior Consultant to coach a new project manager, or you simply need help reviewing project plans and schedules, this service will jumpstart your e-project and keep it on the right track as surprises occur.

E. New Practice Adoption

New practices are supplementing, and sometimes replacing, the restrictive and overly "efficiency-oriented" methods of the past. Many of these practices, including Lean Development, Critical Chain project management, Adaptive Software Development, Dynamic Systems Development Methods, and different forms of rapid and iterative development are new, innovative, and will have a disruptive impact on organizations. Our team of Senior Consultants will help you determine which one(s), if any, of these new practices would benefit your IT organization by improving quality and time-to-market with limited disruption of current and planned projects.

F. Process and Quality Improvement

Even if there wasn't a sound business case for quality in the past, e-business has likely changed that. An investment in process improvement, in quality, or in both, may be essential. 3A-Strategy can perform an assessment to help you determine the extent to which your business case argues for or against an investment in process or quality improvement. And we can help you map out a plan to achieve the results you need to accomplish your business objectives.

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Remark for our Bibliography: *The sources mentioned below are automatically compiled from our literature database and thus can sometimes lead to blank spaces in the list and we have entered some in the document and others based on our database from an old document. Therefore there are two different tables and listing orders! For some references data*

is sometimes not available for certain types of sources. Due to lack of space, certain details have not been included like the URL of the Competence Site. In case, such information is required, do not hesitate to contact us. The last digit is often the year, month and date of publication, for e.g. CW offshgfr with 030402 refers to an article in Computer Week of 2nd^d April, 2003.

These errors in our database referring to sources of articles will be corrected in the next version of this white paper.

I. Index of Tables

Table 1	Typical Offshore Functions and Destinations - source: Own research	40
Table 2	Sample Functions to be offshored by - real world examples - source: Own research	41
Table 3	Market for Offshore Services - source: McKinsey, GlobalInsitute	41
Table 4*	Source: Fort Ross / Russoft	45
Table 5*	Source: Baltic IS Cluster	45
Table 6*	Source: Association of IT Developers Infopark	46
Table 7*	Source: Ukrainian High Tech Initiative	46
Table 8*	Source: Own Research and press releases	47
Table 9*	Source: Own Research and press releases - Label: (in paranthesis) planned for 2005 and onwards	51
Table 10	Ranking of the Top-50 Indian Suppliers - source: Own research 2004	57
Illustration 4	Graduates and Programmers in Offshore nations - source: Bureau of Labour, US government	38
Illustration 5	World Market Software Services – source: EITO 2004	39
Illustration 6	Offshore Attractiveness - source: A.T. Kearney 2004	40
Illustration 7	Major Nearshore & Offshore Destinations and their market size - source McKinsey and Forrester	42
Illustration 8	IITO revenues - source NASSCOM/McKinsey	54
Illustration 9	Exports of ITES by India - source: NASSCOM 2004	56
Illustration 10	BPO revenues India - source: McKinsey 2003	58
Illustration 11	Callcenter service providers - source: Own research 2005	58