

# KEY ISSUES FOR GLOBAL IT SOURCING: COUNTRY AND INDIVIDUAL FACTORS

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Globalization trends, trade liberalization in developing countries, quantum improvements in worldwide telecommunications infrastructures, and cost-cutting pressures have together compelled many companies to examine global opportunities for sourcing some of their IT operations. Such global sourcing, whether it involves insourcing or outsourcing, requires IT project managers to deal with issues unique to operating in heterogeneous international environments. This article examines the influences of country-level and individual-level factors on the effective management of offshore IT sourcing relationships and offers a set of best practices that project managers should consider when entering into such global arrangements.

**O**N OCTOBER 2, 1989, A DEAL WAS signed that would forever change the landscape of IT sourcing. In an agreement worth nearly \$250 million, Eastman Kodak deliberately and strategically handed over control of its data center operations to IBM. While not the first major outsourcing contract of its day, Kodak's move was a harbinger of a new IT sourcing trend. In the 15 years since the Kodak deal, "outsourcing" has moved past being a strategic business option to becoming the "pervasive paradigm" of businesses in the new millennium (Bendor-Samuels, 2000).

In the intervening years since Kodak's landmark decision, outsourcing has become a global phenomenon. Spurred by the frantic Y2K reprogramming efforts of the mid- and late-1990s, companies have looked increasingly beyond their own national borders for partners to help design, develop, and maintain their information systems. Improvements in the telecommunications infrastructures in many developing countries, coupled with a lower cost-base, have led many companies to globally source their IT needs to centers outside their home country. Indeed, a recent Gartner Inc. research

report suggests that, in 2004, 80 percent of all CIOs will be directed to outsource offshore at least part of their information technology operations (King, 2003a).

There is no doubt that the global sourcing of IT and IT-enabled services provides a number of benefits to companies that go beyond simple cost-savings. These include the access to skilled personnel around the world, reduced fixed IT costs, exploitation of follow-the-sun development to improve time-to-market, and compensation for gaps in the internal capabilities of the organization. But managing outsourcing across borders presents a number of significant pitfalls not common to domestic IT contracting.

This article examines the unique challenges of global IT sourcing and the steps managers can take to deal with them. The article first identifies the key factors impacting the success of offshore IT outsourcing and then discusses nearshore, farshore, and global insourcing options. The article concludes with a list of best practices and suggestions for IT managers to consider before outsourcing to other countries.

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#### GLOBAL IT SOURCING: KEY FACTORS

Global IT outsourcing can be defined as the contracting of part or all of a company's IT functions to either third-party vendors or in-house development centers that are based abroad. What once started as simple, remote code testing has progressed to the international sourcing of application development and critical business processes. In its most recent E-Commerce and Development Report (2003), the United Nations Conference on Trade and Development (UNCTAD) presented statistics predicting that such outsourcing agreements in the business processes market alone may reach \$585 billion by 2005.

The promise of global IT sourcing is moderated by a number of country and individual factors. These include telecommunications infrastructure, legal and security issues, time zone differences, national culture, and language barriers.

#### COUNTRY FACTORS

##### Telecommunications Infrastructure

When separated by thousands of miles, managing the global sourcing relationship depends heavily on the quality and reliability of a country's telecommunications infrastructure. In the case of outsourced customer services, such as call centers, this becomes even more critical. Developing countries, where a large percentage of outsourcing contracts go, are often underinvested in business infrastructures and managers must be aware of the limitations before making substantial financial commitments.

In an attempt to attract more outsourcing dollars, many developing countries are now creating special regions within their borders that boast of state-of-the-art telecommunications infrastructures. These "technology parks" provide outsourcing companies with the means to have seamless partnering with local IT organizations. In India, for example, the state of Andhra Pradesh has developed a 30-square-mile high-technology enclave called "Cyberabad," which provides local technology companies with a highly developed telecommunications network, including satellite earth stations and high-speed landlines. The small island nation of Mauritius, located in the Indian Ocean approximately 1200 miles off the coast of Africa, has recognized information and communication technologies as the keys to its long-term development and has invested in setting up a world-class telecommunications infra-

structure with ATM networks, ISDN, and ADSL already available (UNCTAD E-Commerce and Development Report, 2003).

##### Legal and Security Issues

Governmental regulations on technology transfers, intellectual property and copyrights, privacy laws, and transborder data flows can all impact the success of the outsourcing relationship. Two particularly critical issues must be considered when looking offshore: data privacy and security of intellectual property.

Laws governing data privacy vary widely around the world. Consider, for example, the European Union (EU). While the United States currently has no laws that prohibit the movement and processing of data across international borders, the EU's Data Protection Directive requires companies exporting data about EU citizens to meet Europe's very stringent privacy standards. Failure to comply can lead to hefty fines imposed against the offending company. Such privacy requirements can lead to problems for European companies that wish to outsource customer or employee services to developing countries that have no formal data protection laws. India, currently the most popular outsourcing provider nation, is currently working on national legislation that will provide legal safeguards to ensure privacy protection (Vijayan, 2003). Offshore call centers, such as those used for customer technology support by companies such as IBM and Microsoft, have attempted to address data privacy concerns by investing in dedicated telecommunications lines. Such lines pose less of a security risk than using the Internet to field international customer calls (Luce and Merchant, 2004).

Intellectual property (IP) rights are often a gray area in many developing nations. Because outsourcers must often hand over their source codes (for testing and debugging) or share sensitive systems designs (in the case of applications development), they run the risk of industrial espionage by competitors. Legato Systems, for example, has alleged that a former employee at an outsourcer in India stole company trade secrets after being fired and then offered them to Legato's competitors (Fitzgerald, 2003). IP theft overseas is typically governed by foreign laws, and outsourcing client companies should closely examine the legal protection they are afforded by the country to which they outsource.

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The World Trade Organization's TRIPS (Trade-Related Aspects of Intellectual Property Rights) agreement attempts to standardize the way in which intellectual property is protected across member countries. For example, software is protected as literary work under the Berne Convention (1979). TRIPS protection is, however, enforced locally and few countries that are popular outsourcing destinations have laws covering trade theft. The implications of this are that outsourcing companies must invest time researching the trade laws of the countries in which they operate, as well as the performance history of potential vendors. China, for example, has taken a lenient attitude toward software piracy in the past but is now in the process of passing laws that protect private ownership and intellectual property (Furniss, 2003).

#### Time Zone Differences and the Friction of Distance

As offshore outsourcing projects have moved from mundane and mechanical (such as code testing) to co-innovation (as in business process and business transformation outsourcing), the relationship between buyer and provider has evolved as well. Today, outsourcing providers may be seen as partners in the long-term future of an organization, and the strategic nature of many projects requires intensive and constant communication.

Time zone differences are a natural outgrowth of large geographical distances separating collaborating teams. While such differences are often touted as being beneficial by many outsourcing vendors (allowing 24/7 project work), the "friction of distance" can impede effective collaboration. Scheduling meetings with vendors to assess project status can be difficult when there is no overlapping of work-hours. For example, setting a 10:00 am meeting in a Seattle corporate headquarters translates to 10:30 p.m. (or 11:30 p.m., depending on daylight savings) in the New Delhi office of the outsourcing provider. Each time zone represents a potential opportunity loss for simultaneous collaborative work and communications.

While the problem may seem trivial, there is no easy way around it. Some organizations have been looking for outsourcing providers in countries that lie in closer time zones. This allows for a partnership where the offshore outsourcing team can operate simply as remote members of the same project group. This "near-shore" sourcing has made a number of new

countries attractive alternatives to the usual offshore destinations (such as India, China, and Russia). For U.S. companies, Canada, Mexico, The Bahamas, Brazil, and Peru all offer cities that lie within one to three time zones of their corporate offices. The importance of the time zone differences is a function of the level of communication required for the project.

#### INDIVIDUAL FACTORS

In addition to the complications resulting from regional and country factors, there are significant personnel issues unique to offshore outsourcing. These include managing cultural and language differences.

#### Cultural Issues

Culture is defined as:

"an integrated system of learned behavior patterns that are characteristic of the members of any society. It includes everything a group thinks, says, does, and makes — its customs, language, material artifacts, and shared systems of attitudes and feelings"

—Source: Czinkota et al., 1996; p. 298

The significance of this for outsourcers is that patterns of thought and behavior that seem so natural and ingrained in employees of offshore vendors may appear quite alien and incomprehensible to the companies that hire them. Culture impacts the way individuals interact with supervisors, perceive the importance of group harmony, respond to gender issues, and handle quality-of-life concerns.

Table 1 identifies nine dimensions of culture (House et al., 2002). These dimensions are derived in large part from an earlier classic study by Geert Hofstede in which over 100,000 IBM employees around the world were surveyed. Hofstede's original dimensions of culture were uncertainty avoidance, power distance, masculinity–femininity, and individualism–collectivism (Hofstede, 1980).

Clearly, it is problematic to stereotype entire nations based on the above dimensions, but significant anecdotal data exists to warrant their consideration. Managers in charge of offshore projects must be able to adjust their managerial style to incorporate cultural variations. For example, in countries characterized by high power distance (such as Mexico, India, and Russia), employees may be reluctant to question or freely discuss opinions with superiors. Given

**TABLE 1** Dimensions of National Culture (adapted from House et al., 2002)

Cultural Dimension	Description
Uncertainty avoidance	Extent to which members of a society avoid uncertainty (through social norms or bureaucratic processes) to improve predictability of future events
Power distance	Degree to which members of a society expect and accept that power is distributed unequally within a firm
Collectivism I	Extent to which organizations and society reward collective distribution of resources and collective action
Collectivism II	Degree to which individuals see themselves as part of a group, whether it be an organization or family
Gender egalitarianism	Extent to which a society or organization minimizes gender role differences and gender discrimination
Assertiveness	Degree to which individuals are assertive, confrontational, and aggressive in societal relationships
Future orientation	Engaging in future-oriented activities such as planning, investing in the future, and delaying gratification
Performance orientation	Extent to which group members are encouraged and rewarded for performance improvement and excellence
Humane orientation	Extent to which a collective encourages and rewards individuals for being fair, generous, altruistic, caring, and kind to others

the nature of IT development, such open discussions are critical in determining requirements, potential problems, and project deadlines. Gender role differences and discrimination may be prevalent in certain cultures, which can present obstacles to communication with senior managers of the opposite sex. Differences in future orientation can lead to distinctly different attitudes toward deadlines and pace of work.

While not an insurmountable obstacle, cultural differences require managers of outsourcing projects to be “multiculturalists” (Carmel, 1999) with the ability to seamlessly switch between cultural styles as needed.

#### Language Issues

Countries such as Mexico and Brazil offer attractive nearshore alternatives to expensive domestic outsourcing development, but can present significant communication problems due to a lack of fluency in English, the language of business for most outsourcing companies. Indeed, one of the most often-cited advantages for outsourcing to India by U.S.-based firms — as opposed to, say, China — has been the availability of a highly educated, English-speaking population. Similarly, many African countries are attractive outsourcing locations for European countries due to their fluency in French.

In any communications-intensive process, as many outsourcing projects are, the ability to speak a common language is critical. In some cases, offshore outsourcing employees may

find that using asynchronous e-mail communications gives them more time to frame and translate their thoughts than face-to-face dialogue. Managers should ideally allow for a variety of communication mechanisms.

It should be noted, however, that fluency in English is often confused with an understanding of idiomatic expressions. The expression “score a touchdown” may make as little sense in a country whose national sport is cricket as would “hitting a sixer” in the United States. In interacting with offshore personnel, managers should be careful to avoid culturally unique references.

#### COMPARING NEARSHORE AND OFFSHORE OUTSOURCING

In a survey of 252 corporate IT managers in the United States, 44 percent identified cost-savings as the primary reason most global companies source IT needs outside their own domestic borders (King, 2003b). To achieve the desired savings, companies must be able to effectively manage and plan for the factors outlined above. As projects move farther and farther from domestic shores, the relative impacts of these factors will vary.

The main advantage of nearshore outsourcing locations is overlapping, if not identical, time zones, thus allowing for active and continuous collaboration and monitoring. Certain nearshore options, such as Canada, may provide greater cultural and linguistic proximity but typically cost more than outsourcing desti-

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nations in Asia and Eastern Europe. Other emerging nearshore countries, such as Mexico, Brazil, and Venezuela, may be able to offer low-cost personnel but may currently lack sufficient software development experience to handle highly complex IT projects.

Despite problems associated with distance, time zones, local intellectual property protection, and culture, the significantly lower costs coupled with experienced IT vendors capable of managing highly complex projects assure farshore destinations like India of continued business from Western companies.

#### GLOBAL INSOURCING

To overcome some of the problems with global IT sourcing to third-party vendors, many large corporations have committed themselves to strategic global *insourcing*. The global insourcing model attempts to reap the dual advantages of low-cost offshore environments and an internally controlled development environment. The most common tactic of the insourcing strategy has been for a company to establish offshore IT centers at its traditional offshore sites. In this model, foreign technology workers are employees of U.S.-based companies and receive the same training, software tools, and development process guidelines as their Western counterparts. Avon Products, Inc., for example, established a 15-person Web development team at its IT insourcing center in Hungary, and is exploring the possibility of such centers in Russia, Latin America, and Asia as well (Hoffman, 2003). The main difference between these workers and domestic employees is salary. Maryland-based Global Exchange Services Inc. estimates that for every \$100 spent on IT workers in the United States, it spends only \$30 on employees in Bangalore, India (King, 2003a).

Another strategy is one that exploits "the best" advantages of offshore outsourcing *and* insourcing. Although use of the term varies, Offshore Development Centers (ODCs) typically involve an outsourcing vendor dedicating personnel and resources to a single organization's IT portfolio. For example, Otis Elevator, a subsidiary of United Technologies, has arranged for its preferred outsourcing partner to provide a permanent, 20-person team to work solely on Otis projects (Overby, 2003). As part of an organization's global network, ODCs offer not only lower labor costs, but also a number of other advantages, including:

- Shared knowledge and resources
- Greater control over intellectual property
- Retention of domain knowledge and skills within the organization
- Common organizational culture
- A sense of belonging for offshore workers

#### BEST PRACTICES IN GLOBAL IT SOURCING

Given the complexity of managing projects in disparate international environments, it is useful to keep in mind some basic rules as they relate to global IT outsourcing. Here is a set of best practices to consider for managing the country and individual factors introduced above.

##### Country Factors

#### Telecommunications Infrastructure

- Determine the availability and cost of high-speed data communication options.
- Identify technology parks or zones that may have specially developed infrastructures to support offshore IT outsourcing.

#### Legal and Security Issues

- Examine the offshore country's laws and legal safeguards as they relate to data security and privacy.
- Be familiar with your own country's trans-border data-flow laws (many data privacy acts such as HIPAA<sup>1</sup> and Gramm-Leach-Bliley<sup>2</sup> place privacy constraints on data handling, regardless of location of processing).
- Be sure that the offshore provider has access to dedicated telecommunication lines when dealing with the processing of customer data.
- Determine if the offshore country is a signatory to TRIPS and if there is local legislation in place for the protection of intellectual property.
- Choose an offshore vendor with significant assets in your own country, in case of legal disputes.
- Be diligent in evaluating the vendor's performance history, including security. This includes project success rates, quality of employees who will be working on your project, past contract disputes with other companies, and if a security policy governing the handling of data is in place to ensure that trade secrets are not threatened.

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### Time Zone Differences

- Consider nearshore outsourcing options when it is useful to have overlapping office hours (zero to three time zones). This is common in projects where communication occurs on a daily basis or managers are uncomfortable with having a critical project thousands of miles away.
- Consider farshore outsourcing options (ten or more time zones) where time-to-market is important and the outsourcing provider is experienced, and the project does not require intensive buyer-provider communications.

### Individual Factors

#### Cultural Differences

- Take the time to understand the history and culture of the country to which you are outsourcing projects and accommodate the differences in work habits and forms of communication.
- Use a mix of communication media — face-to-face, teleconferencing, discussion boards, and e-mail. Individuals from certain cultures may be more comfortable communicating with certain asynchronous media than real-time ones.
- Appoint a project manager who has experience with the country to where you are sending work. If no such person is available, schedule at least one extended visit by the manager to the offshore site so that he or she can understand the context in which the work will be done.

### Language Barriers

- Do not confuse language fluency with an understanding of culturally specific idioms.
- Speak clearly and repeat yourself often, until you are sure that everyone is on the same page. Western accents and pronunciations are often very different than what employees in the outsourcing provider usually hear.
- If outsourcing a support call center, be sure to oversee the training of the support staff in the offshore country. Redirecting calls to overseas locations can lead to customer frustrations in dealing with local accents and scripted responses.

### CONCLUSION

It is widely accepted that global IT sourcing has become an “irreversible megatrend,” and the future promises the emergence of many new potential offshore locations and outsourcing providers. Both country- and individual-level

factors must be taken into account when evaluating outsourcing options and managing offshore vendor relationships. ▲

### Notes

1. The Health Insurance Portability and Accountability Act of 1996 represents a federal privacy standard to protect patients' medical records and other health information provided to health plans, doctors, hospitals, and other health-care providers. Additional information is available at the U.S. Department of Health and Human Services Web site (<http://www.hhs.gov/news/facts/privacy.html>).
2. Also known as the Financial Modernization Act of 1999, the Gramm-Leach-Bliley Act includes provisions for protecting consumers' personal financial information held by institutions. The act covers financial privacy, safeguards, and pretexting (obtaining information under false pretenses). Additional information is available at the Federal Trade Commission's Web site (<http://www.ftc.gov/privacy/glbact>).

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