Chapter 2.23
Offshore Software Development Outsourcing

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OFFSHORE SOFTWARE DEVELOPMENT OUTSOURCING EVOLUTION

Until the global economic downturn of the new millennium, demand for information technology (IT) professionals exceeded supply mostly due to specific skill sets such as integrating legacy applications with Web development, project management, telecommunications, mobile commerce, and enterprise resource planning. More firms are turning externally not only to local vendors but also to services across the globe (Carmel, 1999). Staff supplementation from domestic contractors has evolved to a sophisticated model of partnering with offshore/nearshore software development firms. Many of these relationships evolved from a short-term project need for select skills to a long-term commitment of resources, cultural diversity efforts, and dependencies that integrate vendors as partners.

The most pervasive IT project, Year 2000 (Y2K), had constraints of skill sets, time, and budget. IT managers had to look at many alternatives for achieving compliance. Firms that planned as early as the mid-1990s had time to experiment and build new relationships. With governmental sanction and support, some countries and their business leaders recognized the competitive advantage their labor force could offer (O'Riain, 1997; Heeks, 1999; Trauth, 2000). An unusual need for services because of Y2K, economic disparity within a global workforce, and proactive efforts of some governments led to the fostering of offshore software development.

Early companies to outsource offshore were software vendors. Managing offshore development smoothly took years and a certain type of project management expertise in addition to a financial commitment from executives. The activity involved new applications and integrating

software development with existing domestically built applications. The Y2K investment and intense cultural communication paid off for firms willing to work through the challenges. Not only did initial offshore projects provide a solution to the skill shortage, they also yielded substantial cost savings when compared to outsourcing the work domestically. Such factors resulted in these relationships continuing past Y2K, where some companies now regard their offshore arm as partners.

The IT outsourcing market was estimated at over US$100 billion by 2001 (Lacity and Willcocks, 2001). Although outsourced IT services can include call centers and facilities management, this discussion focuses on outsourcing software development. "Offshore" software development typically refers to engaging workers from another continent. Examples are U.S. companies using Indian contractors. "Nearshore" software development refers to vendor firms located in nearby countries often on the same continent, for example Dutch firms engaging Irish software developers. For our purposes, discussion of offshore software development issues is assumed to apply to nearshore outsourcing, since most of the issues are the same.

Most firms already have had experience supplementing their staff. Dealing with offshore firms, however, is relatively new for firms whose main business is not software development. Distance, time zones, language and cultural differences are some key issues that differentiate offshore software development from the use of domestic contractors or consultants (Carmel, 1999). Nearly 1 million IT-jobs will move offshore from the United States by 2017 (Gaudin, 2002).

The most common reasons for outsourcing are cost reduction, shortages of IT staff, reduced development time, quality of work, and internationalization (see Table 1).

APPROACHES TO OFFSHORE SOFTWARE DEVELOPMENT

The approaches taken to offshore development describe the basic features of how firms have structured their relationships with offshore software developers. The basic dimensions include the type of organization that provides offshore services, the nature of the working relationship that clients have with that organization, and whether offshore staff are on a defined project or in a staff augmentation role.

Type of Organization Providing Offshore Development

An important dimension for describing the relationship with foreign software developers would be the basic types of organizations with which client firms form an outsourcing arrangement. The basic options are to contract directly with an offshore IT services firm, to engage a domestic IT services firm with offshore capabilities, or to set up a wholly owned software development center in an offshore location.

- Direct contract with an offshore firm – The client firm contracts directly with the offshore software firm. This option represents a range of alternatives.
  - Long-distance contracting – the offshore firm maintains no permanent staff in the country of their clients. Clients and offshore firms use long distance communications technologies such as phone, e-mail, and short-term visits.
  - Limited presence – Offshore firms locate some staff in client countries by setting up satellite offices in one or more cities. Most of the work is performed offshore, but a local project manager and a small local team answers questions and function as liaisons to solve problems.

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