

## OUTSOURCING

Historically, outsourcing has referred to “the practice of subcontracting manufacturing work to outside. . . companies” (*Merriam Webster’s Ninth New Collegiate Dictionary*). Today, though, the outsourcing phenomenon has affected almost every business. As a strategic approach intended to enhance a company’s core competencies, outsourcing has been adopted across various industries. Companies in the manufacturing, services, and financial sectors are all involved. In terms of scope, everything from information services to human resources functions has been covered. Two general motivations behind outsourcing include downsizing and cost reduction (1). This article uses outsourcing of IT functions as an example throughout, but the concepts discussed are applicable to any outsourced organizational function.

Even though outsourcing production elements is not a new idea, some unique characteristics of information systems (IS) assets make the decision to outsource IS services even more critical. After Kodak outsourced the majority of its mainframe IS functions to IBM, Businessland, and DEC in 1989 (2,3), more and more large firms began to use outsourcing. The IS outsourcing market had quickly grown to a \$40 billion business by the mid 1990s (4). Moreover, market research firms estimate that 70% of the largest corporations had outsourced their information systems to some extent by 1995 (5). They include British Aerospace, British Petroleum, Continental Bank, Continental Airlines, General Dynamics, McDonnell Douglas, National Car Rental, Southland, and Xerox (6).

Discussing information systems services explicitly, Alpar and Saharia (7) define IS outsourcing as “an ‘intermediate to long-term’ arrangement (often five to ten years) between an outsourcing firm and one or more independent vendors who are contracted to provide the firm repeatedly with various information systems services throughout the life of the contract.” Lacity and Hirschheim (8) give a broader view of IT outsourcing—“the purchase of a [IS] good or service. . . previously provided internally.”

Early forms of IS outsourcing practices were generally restricted to single-systems contracts handling a small proportion of the IS function, such as payroll, insurance processing, credit cards, or mailing lists. But outsourcing today deals not only with multiple systems, but also with significant transfer of assets, leases, and even staff to outsourcing firms. Typical categories of outsourcing targets include data processing, telecommunications, applications development, application maintenance and support, security, and user consultation and training (8).

Time-based contracting is one of the most significant elements of outsourcing. A typical outsourcing deal involves the negotiation of a set of baseline services. The vendor promises to charge a fixed fee for the baseline over the whole contract period. However, services beyond the baseline agreement

need to be purchased for an additional fee (8). It is also important to notice that the type of outsourcing specified here is very different from the common *quid pro quo* exchanges, where the relationship ends after the transaction is conducted. Outsourcing, however, may involve unexpected changes beyond the control of either party or postcontractual opportunistic behavior from one party. That is why outsourcing contracts generally incorporate clauses handling uncertainties envisioned at the time of contracting. They also include clauses for settling controversies in case of “unanticipated contingencies or differing interpretations of the contract” (7).

A common practice in IS outsourcing is to transfer some or even all of the IS resources, including both physical facilities and people from the outsourcing firm to the vendor as part of the contract. Ang (9) argues that such different combinations of “in” and “out” choices for various resources actually define different organizational boundaries. Looking at the outsourcing arrangements from this multidimensional view can help us to get better insight about the relationship between outsourcing and control.

Ang (9) defines outsourcing according to the following criteria:

- Outsourcing occurs when a business activity is performed or located away from the premises of the business entity.
- Outsourcing occurs when an organization relinquishes legal ownership of physical assets required for the conduct and execution of business activities.
- Outsourcing occurs when an organization uses nonemployee agents to execute business activities.

Categorizing the full spectrum of outsourcing arrangements along these dimensions suggests how the outsourcing decision affects management control. This relationship is summarized in Table 1. The table suggests that the more resources are transferred “out,” the higher is the risk of losing management control. The ideal outsourcing choice should be, as Dale Kutnick, president of the Meta Group Inc., of Westport, CT, puts it: “strategic is ‘in’, drudgery is ‘out’” (10).

The whole concept of “strategic outsourcing” (11) emphasizes the strategic value of certain firm-specific assets, and suggests that companies keep their core competencies under in-house control. Evidence that retaining strategic IT assets affects IT outsourcing decisions, which, in turn, affect organizational performance has been found by Weill, Straub, Stewart, and Broadbent (12) in a major study of several dozen large international firms.

Besides control, “flexibility” is another important concern related to outsourcing decision. In times of uncertainty, managers will want to develop a more flexible work force, one that can be shrunk or expanded with little direct impact on the organizations. Thus, achieving well-balanced control and flexibility becomes the central theme of outsourcing. Quinn and Hilmer (11) introduce both dimensions in their framework (see Fig. 1).

The rapid changes in emerging information technologies and the need for cross-functional integration of business processes call for a more flexible IT infrastructure. Given the relatively large switching costs associated with traditional out-

**Table 1. Sourcing Decision and Management Control (9)**

	Spatial	Physical Assets	Human Assets	Management Control
In-house	In	Yes	Employee	High
Parent company	Out	Yes	Employee	Low
Another company in same industry	Out	No	Contractor	Low
Service bureau	Out	No	Contractor	Low
Joint venture	Out	Yes	Contractor	Medium
Facilities management	In	Yes/No	Contractor	Medium

sourcing arrangements, more and more companies are looking for short-term outsourcing relationships. One solution to this problem is selective outsourcing (13). “Selective” IT outsourcing is generally characterized by short-term contracts of less than five years and of reduced scope. It is an incremental approach that requires companies to carefully select IS functions to outsource, rigorously evaluate vendors, tailor the terms of the contract, and actively manage the vendor (4). It is argued that selective outsourcing has the potential to provide a more flexible IT function, effectively migrate risk, and develop in-house learning from outsourcing over time (4).

#### OTHER OUTSOURCING ROLES

Various roles come into play when one talks about IT outsourcing. Some of these roles refer to specialized outsourcing relationships; others are more generic and are typically used to refer to any and all client–selling firm or buyer–seller relationship. Thus many of these terms may be used interchangeably in discussing IS outsourcing.

Service bureaus are specialized IT outsourcers. These firms are often involved with the provision of information to other organizations. Good examples of services bureaus are credit bureaus and data-processing firms, such as those that process payrolls and employer services to other entities.

Contractors range from the small contractor hired to program a specific set of functions for a new system to a large contractor paid to perform a broad set of tasks. In the case of the former, a firm might hire an independent programmer to work on a limited, temporary basis on a specific program. In

the latter case, the IS consulting arm of a global accounting firm might be paid to develop a new IS strategic plan for a firm.

Vendor is a general term meaning seller. In the IS context, it refers to firms that supply hardware, software, networks, and services to other organizations.

Consultants specializing in IT tend to sell their knowledge about systems, systems management, and the development process. Consultants might be hired to help a firm write a request for proposal (RFP), design an information architecture, or develop a complete information system.

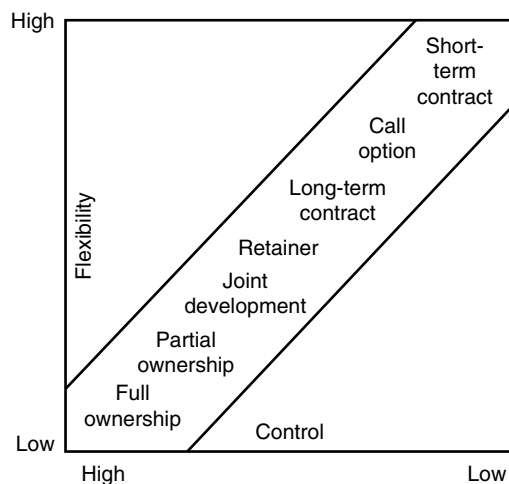
#### DEFINITION OF SYSTEMS INTEGRATION

Systems integration is another term associated with IT outsourcing. Systems integration is the seamless incorporation of new IT systems and services into the firm’s ongoing processes. Persons engaged in systems integration include: (1) the firm representative/manager, and (2) the vendor representative, commonly called the systems integrator. When firms hire outsiders to integrate their systems, they need to ensure that control does not pass entirely into the hands of the integrator. Successful systems integration involves a careful monitoring and controlling of the systems integrators by the client firm. To ignore this responsibility is to invite unbridled opportunism on the part of the vendor.

#### WHY ORGANIZATIONS OUTSOURCE IT

A common management goal in both for-profit and nonprofit organizations is to enhance the value of the organization. Outsourcing is just one of the tools management uses to accomplish this. Typically the goal of “maximizing shareholder value” can be achieved in one of two ways: either through cost reduction or through strategic activities designed to enhance revenue (12). Although virtually any activity of an organization can be outsourced, the remainder of this discussion focuses on the outsourcing of an organization’s information systems. However, no matter which activity is being considered for outsourcing, the same types of considerations and analysis should be applied in making this decision.

Cost reduction through outsourcing occurs when the decrease in *production costs* for the outsourcing organization exceeds its accompanying increase in *transaction costs*. According to classical economics, an organization will provide those goods and services in which it has a comparative cost advantage, and purchase those goods and services in which it has a comparative cost disadvantage. By carefully balancing

**Figure 1.** Potential contract relationship (11).

this make-versus-buy mixture of goods and services, the organization can minimize its production costs.

However, whenever an organization purchases goods or services from an outside vendor it incurs so-called transaction costs. *Transaction costs* have multiple components. These components include the costs incurred in searching for, selecting, and negotiating a contract with the vendor. In addition to these initial costs, there are further costs throughout the duration of the contract related to the monitoring of the quality of the goods or services provided and, if necessary, costs incurred in enforcing the terms of the contract. Although an organization will incur costs in monitoring the quality of internally produced goods or services, because of the organization's greater measure of control over the process providing the goods or services, these costs of internal monitoring would normally be substantially less than the monitoring costs for the same goods or services purchased from an external supplier.

Thus, when an organization is examining the issue of whether to outsource or to insource a good or service, both the production economies and the transaction costs arising from the decision should be considered. However, in conducting this analysis, organizations frequently place excessive emphasis on the production economies and fail to adequately examine the transaction costs (14). In the worst case, this can lead to an incorrect "make-or-buy" decision, and in the best case may lead to a decision that adds less value to the organization than expected. Therefore, cost reduction should be used as a rationale for outsourcing only when both the production economies and the transactions costs are carefully evaluated and seen to provide a net cost reduction.

In contrast to the cost-reduction approach, the strategic approach to outsourcing seeks to add value to the firm by allowing it to concentrate all its efforts on its core competencies. The rationale under this scenario is that there is a small number of activities at which an organization excels. This set of activities is the organization's core competencies. By concentrating its energies on its core competencies, an organization can create a competitive advantage. As a result, the organization enhances its revenue stream. For an organization to concentrate on its core competencies, it should minimize the energy it spends on non-core competency activities. Outsourcing these activities minimizes the energy an organization spends on them and allows the organization to focus on an area where it has developed an inherent expertise or strength.

Another approach some organizations have taken to outsourcing is to temporarily add value through artificially structured financial transactions as part of the outsourcing transaction (8,14). Typically, this is undertaken by financially distressed organizations who viewed the infusion of cash that could be obtained through the sale of assets to the outsourcer, frequently at inflated values, as a means of providing needed capital. In this type of deal, the outsourcer would recover its costs associated with this through long-term contracts at higher-than-normal rates, thus adversely affecting the long-term value of the outsourcing organization. This type of outsourcing activity has fallen out of favor in recent times.

Although enhancing the organization's value is a common and reasonable rationale for outsourcing, it is not the only one. Some organizations appear to outsource as a result of institutional pressures. This may be a "me-too" response to

outsourcing by industry leaders, or a business unit following the cue of its corporate office. The benefit of this approach to outsourcing is questionable (15).

## BASIC CONSIDERATIONS

In thinking about outsourcing, there are four basic questions to examine. These questions are: (1) what to outsource; (2) to whom to outsource; (3) how much it will cost; and (4) how to measure success. These questions should not be considered independently, but rather as a set of interrelated questions where the answer to one will impact another. Thus the outsourcing decision should be taken holistically, and not in isolation.

## WHAT TO OUTSOURCE

When considering what to outsource, both the organization's current position, and its future strategy and direction should be considered. For example, outsourcing an organization's information systems activity, or parts of that activity, will require the divestiture of both physical assets (facilities and equipment), and people. Once these are gone, it may be expensive, in the case of physical assets, and extremely difficult, in the case of people, to reacquire these should the organization wish to reverse the outsourcing decision. Thus the outsourcing decision should not be viewed as a short-term, tactical maneuver.

If an organization's strategic direction, current or future, depends upon an activity that is to be outsourced, then it is not appropriate to outsource that activity (12). An organization's strategies should be built around its core competencies. These core competencies are those activities at which the organization excels, and over which it must keep absolute control to maintain and enhance its market position. Outsourcing reduces the degree of control which the organization can maintain over these activities and, by extension, its ability to compete successfully in the marketplace. Thus not all activities of an organization should be considered for outsourcing.

Only an organization's noncore activities should be considered for outsourcing. However, even noncore activities may not be appropriate outsourcing targets under all circumstances. When a noncore activity is so closely linked with a core activity that it would compromise the core activity if it were outsourced, then do not outsource that activity. All other noncore activities are candidates for outsourcing.

When considering whether to outsource an activity, an organization should first benchmark that activity. Benchmarking the activity compares the organization's performance of that activity with that of organizations performing the activity at world-class levels. Thus the organization comes to understand how well and at what cost it performs the activity being measured, and more important, the level of performance and cost that could be achieved for that activity. Knowing how it currently performs, and the possible levels of performance for an activity, enables an organization to objectively set standards by which it will evaluate an outsourcing vendor's proposal. Should no vendor be able to offer a better cost/performance ratio for the activity, then the activity should not be outsourced.

## OUTSOURCE SELECTION

Vendor selection must be done carefully. Outsourcing typically involves multiyear contracts, and potentially significant transfers of assets and personnel from the outsourcing organization to the vendor. Should the vendor subsequently not perform as expected, it may be difficult for the outsourcing organization either to enforce performance or to break the contract without significant additional expense. Further, even if the organization is able to break the contract, it will still face the difficult and costly tasks of rebuilding and restaffing its facilities.

Another major concern is who of the vendor's staff will support the outsourcing organization. One reason to outsource is to gain access to technical strengths that the outsourcing organization does not possess. However, if the vendor hires all or part of the outsourcing organization's staff to be the new supporting staff, as is frequently the case, the outsourcing organization will not have gained the desired technical expertise (8). By way of contrast, since the organization's former staff are now vendor employees, the vendor is free to reassign the best members of its new staff to work with other clients. This then deprives the outsourcing organization of talent from which it had expectations of continuing support.

In the absence of any specific contractual provisions when a firm sells its staff to the vendor, the outsourcing organization loses control of that aspect of its operations. In doing this, the organization must understand that it will lose a possibly significant amount of organizational knowledge embedded in the heads of its former staff members. Although those same individuals may continue to support the organization, at least for some period after the transition, the business relationship between the organization and its former staff has changed, and the organization is now a client, not an employer.

Although many outsourcing organizations speak of "strategic partnerships" with their vendor, it is rare that there exists a true strategic partnership (8). In most situations, the vendor will have less at risk than the organization and will view the organization simply as a client. In contrast, the organization relinquishes control over some part of its business processes to the vendor, and assumes the risk that the vendor will perform these activities as agreed, while the vendor is merely providing a service to another client in the course of its business. Thus, although the loss of a client may be detrimental to the vendor, the relative magnitude of damage that can result is small compared with that which could result to the client from the mismanagement of a business process.

Thus it is critical for the outsourcing organization to know the vendor with whom it will contract. The organization should examine the vendor's past history of similar deals. In examining this, the outsourcing organization should inquire of other clients as to the vendor's level of performance and the cost of this as measured against the contracted service levels and precontract cost estimates. Significant performance or cost deviations from those expected should serve as a warning to the outsourcing organization.

## HOW MUCH IT SHOULD COST

The cost of outsourcing an activity will depend on many factors. Ultimately, however, the cost will depend on the number

of competitive vendors seeking the contract and the skill of the outsourcing organization in negotiating the contract to include the services it actually uses.

When there are multiple, capable vendors seeking the contract, then an organization can expect its contract to cost less than if there is only a single vendor (14). For competitive reasons, each vendor will try to provide the best value to the outsourcing organization. Thus, although cost will be a critical factor in the contract presentation, some vendors may deliberately choose not to attempt to provide the low-cost solution, but to differentiate themselves on some other basis. The outsourcing organization must understand the basis on which it will select a vendor, and the role cost plays in that selection.

By contrast, in a single-vendor situation, the outsourcing organization can expect the vendor to engage in opportunistic pricing. In this situation, the vendor has to make the contract just attractive enough for the organization to accept it. Thus, for a specified level of service, the vendor may not offer as low a cost as the organization could otherwise expect.

The expectation of reducing cost through outsourcing rests on the assumption that the vendor has economies of scale and efficiency (8). Traditionally, these would be thought of in terms of production facilities. One such economy would be the consolidation of multiple clients' operations onto a single, large mainframe instead of maintaining individual, smaller machines for each client.

Running a single, large mainframe yields numerous potential savings. First, the cost of purchasing the single machine could be significantly less than the aggregate cost of the client machines. Second, because of the higher volume of purchases that outsourcers make, they receive larger discounts from the equipment vendors. Third, the outsourcer will use a single facility to house the equipment. Thus, the facilities overhead costs associated with the data center will be significantly lower than the total of the facilities costs incurred by the clients whose applications have been consolidated onto the outsourcers mainframe. Fourth, running a single mainframe will require less total staff than that required to run each of the clients' individual machines. Fifth, the outsourcer will be able to share a single copy of certain common software across all the clients. The cumulative effect of these factors other than, possibly, the last (8), leads to the expectation that the vendor enjoys a significant cost advantage in the production process, and as a result can provide these services at a lower cost than the organization considering outsourcing.

In reality, the vendor may not have as large a cost advantage as commonly perceived. While the outsourcer may receive discounts from the equipment vendor, the outsourcing organization may also be able to obtain a large portion of that discount. A more significant factor may be an outsourcer's cycling of equipment to stay with leading-edge technology. Typically, each new generation of equipment provides greater performance for a lower cost. This cost-performance advantage will be available to both the vendor and the outsourcing organization. The outsourcer, however, may have a greater awareness and understanding of this than the outsourcing organization. As a result, the outsourcer can fully take advantage of this in determining its profitability on the contract, but either not reflect at all or not fully reflect this lowered cost of technology in the contract pricing proposal to the client. Thus, by failing to adequately consider this technology cost-

performance curve, the outsourcing organization may pay too much for the service it receives.

Another area in which the outsourcer's cost advantage may not be as large as perceived is that of software. While an outsourcer may be able to share a single copy of a particular piece of software among multiple clients, changes in the way software is licensed have greatly reduced the cost benefit of doing this. Before outsourcing gained in popularity, an organization would typically pay a single, fixed price to license a piece of software regardless of the number of people who used it. However, with the rise of outsourcing, this model became unprofitable for the software providers. Accordingly, many software providers have moved to a licensing fee structure based on the size of the hardware on which the software will be run. Thus the license fee to run a piece of software on an outsourcer's large mainframe is higher than the cost to run that same software on the outsourcing organization's smaller machine. Further, the software provider will normally levy a sizable fee to transfer the license for the software from the outsourcing organization to the outsourcer.

The outsourcer may genuinely derive some economies of scale in the areas of software, equipment, and facilities. Although these economies may not be as great as commonly perceived, they can be exploited in the usage levels of the assets. Should the outsourcing organization either over- or underutilize that quantity of service they have purchased, then the vendor will either levy additional charges, or receive revenues for which it is providing no actual service.

Correctly anticipating both the quantity and the scope of the services required during the period of the outsourcing contract is critical for the outsourcing organization (8). These issues, quantity and scope, are distinct, and both must be accurately anticipated if the outsourcing organization is to realize the cost savings it anticipates.

Determining both the quantity and scope of the services required will be greatly facilitated if the operations have been benchmarked as part of the outsourcing decision. If they have not, then they should be measured before the pricing stage of the contract negotiation. Consideration must be given to determining the appropriate type of measurement to be applied against the different services to be outsourced, and the specific nature of the service itself. An example may best serve to illustrate the importance of this issue.

In an organization that intends to outsource its LAN and PC administration, its mainframe production operations, and its systems development group, for instance, no one measurement of the quantity of services currently supplied is appropriate. Simply to total the number of hours worked by the employees performing those operations over some arbitrary period of time, and then to contract for that amount of service from the outsourcer, is too simplistic.

There are several reasons why the simple aggregation of labor cost is inadequate. First, there is the issue of the hours when the service is performed. For LAN and PC maintenance, as for systems development, this may be primarily within defined standard work hours but with emergency on-call coverage for out-of-hours problems. Unless this is identified and specifically provided for in the contract, the vendor may agree to provide the required number of hours of service, but only during standard work hours with any out-of-hours service being provided as a premium, additional charge service. Thus the organization is paying for service for which it will have

no use during the normal course of events, but paying extra for the out-of-hours, emergency support currently rolled into its existing cost structure.

Distinct from the standard work hours of the LAN and PC administration and systems-development groups, the mainframe production operations may run on a 24 h  $\times$  7 days basis. At first sight this may appear to dramatically simplify the decision on the amount of service to buy. In this case, however, the very nature of the measurement must be questioned. Even though the work load on the mainframe could be accomplished by a fractional employee, given the impossibility of fractional employees, the outsourcing organization would engage a full employee to perform the work. In a consolidated operations environment such as the vendor may offer, the excess work capacity afforded by a full operator employee when performing the work load attributable to the outsourcing organization would be utilized to perform work for other clients. This poses the problem of how to measure the fraction of an employee required to perform the work for the outsourcing organization. This issue is avoided by selecting a more appropriate unit of measurement, in this instance a direct measure of the mainframe system resources required to perform the actual work.

Using the new measuring unit does not eliminate all problems with determining the correct quantity of mainframe resources to purchase. If the operational resource requirements vary periodically and exhibit a pattern of peaks and troughs, then the baseline measurement period must be chosen so that the effect of this is included. Here again, it will not be adequate to simply take an average of the required system resources. Doing this would ensure that for half the time the outsourcing organization is paying for resources it will not make use of and for the other half the time it is paying additional for, excess usage of resources. Thus some account must be taken of the actual usage patterns when negotiating the service cost. Beyond this issue, there are still further problems. In the event that the vendor consolidates the outsourcing organization's operations onto its own system, there is the issue of how to translate resource measures made on one machine to resource usage on a different machine. Many factors affect how well a mainframe system performs, and hence the resources it consumes in executing the outsourcing organization's work. Thus this should be specifically taken into account, perhaps through correlation of measures of actual resource usage for a specific period with the comparable measures in the baseline period.

This example shows clearly the importance of determining the appropriate unit of measurement, and selecting a truly representative baseline period in determining the quantity of service to purchase. It does not, however, address another, equally important factor in determining the required quantity of service. Since outsourcing contracts are typically multiyear contracts, a successful outsourcing organization would normally expect to experience volume growth in its activities. As a result, the quantity of the supporting services could be expected to increase also. Thus, when determining the quantity of services to purchase, the outsourcing organization should make provision for its anticipated growth throughout the duration of its contract.

Although much emphasis has been placed on the determination of the correct quantity of services to purchase, it is equally important to ensure that the appropriate breadth of

services is explicitly purchased. As part of its determination of the quantity of service to purchase, the outsourcing organization should examine each of the activities performed in-house as part of the service, and ensure that these same activities are specifically included in the contractual definition of that service. Failure to do this may result in the outsourcing organization paying for additional activities previously included in the in-house definition of that service.

### HOW TO MEASURE SUCCESS

Measurement of the success of an outsourcing project begins by defining the criteria for success before the contract is signed. There are two primary success criteria: the agreed service levels, and the anticipated total cost of service.

The agreed service levels should be clearly stated in the contract. In addition to the stating the specific level of service that the vendor will provide, the contract should also provide a mechanism for monitoring and reporting the actual level of service achieved, and specific penalties to be applied to the vendor should these levels not be achieved (8). Having a monitoring and reporting mechanism for the achieved service levels is essential to ensure that the agreed-upon service levels are being maintained. This monitoring and reporting should not be a vendor's responsibility, but that of the client manager assigned to this vendor relationship. Otherwise, there would be a potential conflict of interest for the vendor should the service levels not be achieved. However, it is essential that the monitoring and reporting scheme be mutually acceptable so as to avoid dispute regarding the vendor's performance and liability for penalties.

In contrast, the anticipated total cost of the service should be a document external to the contract. This cost figure would include not only the expected contractual cost of the service based on the quantity and scope of services purchased, but also the organization's anticipated transaction costs associated with monitoring the contract. Further, these costs should be broken down into the time periods in which they are expected to occur in order to account for the time value of money.

For the contract to be judged successful, both the service level and total cost of service criteria should be met. Although any failure to meet a service level is technically cause for the project not to be considered successful, breaches of some service level agreements will result in less harm to the outsourcing organization than others. Thus the consequential harm of a failure to meet a service level agreement should be examined when judging the success of the contract. Similarly, when considering the total cost of service criteria, both the total cost of service and its distribution over the period of the contract should be compared to the anticipated cost and its distribution. Because of the time value of money, front-end loading of the costs effectively increases the cost burden to the outsourcing organization. Thus final measurement of the success of an outsourcing contract may not be a simple matter.

### MAKING THE DECISION

To make an informed decision about outsourcing, an organization should understand clearly what it expects to receive,

what it is giving up, and also the vendor's expectations from the deal. What the organization expects to receive should be explicitly defined both in terms of net cost reductions, and service level agreements. The organization should have measuring mechanisms in place to ensure it receives what it expected to receive, and clearly defined compensatory sanctions to apply against the vendor if it does not receive the contractual service levels. Clearly, understanding both the operational and strategic impact of the activities being considered for outsourcing should ensure that the organization does not outsource a core activity which is critical to its ability to provide value to its customers. Finally, understanding the vendor's expectations should assist the organization to assess the fairness of the deal, and the likelihood that it will provide the expected benefits.

Quantitative approaches to deciding to outsource and which vendor to hire include: (a) cost-benefit analysis, and (b) scoring models. Cost-benefit analysis tools include: (1) return on investment (ROI) analysis, (2) cost/benefit ratios, (3) profitability analysis, (4) net present value, (5) payback years analysis, and (6) internal rate of return assessment. Such tools give decision-makers a sense for whether the investment in an outsourcer will net the firm cost savings over the years. It is critical to note, though, that none of these methods explicitly considers transactions costs as a deduction. Nor do they consider the possibility that some vendors are riskier than others. Therefore, such quantitative tools must be used with extreme caution.

Scoring models are typically used to compare vendors and their offerings. Scoring models allow decision-makers to weight a set of success factors, such as cost savings, vendor reputation, and number of features in vendor offer, by assigning a "score" to each vendor to derive an overall score for each bid.

### MANAGING THE OUTSOURCING PROCESS THROUGH RFPs

Organizations of all types are under a constant pressure to provide a higher level of service or product quality while stabilizing or reducing their costs (16). This translates into increasing efficiency and effectiveness of building supporting systems and their level of integration. For many firms selective outsourcing will be a good choice for new initiatives.

However, to be able to effectively implement a new information technology innovation, client firm management must be heavily involved in the process, not to the extent of becoming technologists but having an adequate set of principles and understanding of the issues involved in the given project and appreciation of the underlying principles. Internal management, thus, plays a critical role in overseeing outsiders who are handling important elements of the firm's business.

Traditionally, one way of determining which outsourcer to select is through a request for proposal (RFP). RFPs are a defining element in a competitive bidding process which should yield the lowest price and/or highest quality for a specified scope of work. They are documents that express the firm's requirements for new systems or new systems services and specify the formats for replying to the request with a bid.

RFPs are an established way to determine who the best providers of new systems or services might be. This time-honored means of selection is being increasingly challenged, how-

ever (17). Government and health care organizations, which have traditionally relied on RFPs, are streamlining their processes and either shortening the time and effort involved in an RFP or eliminating it entirely. RFPs can be eliminated, for example, with a preferred vendor strategy.

Shorter or specialized forms of RFPs have also been devised to speed up the process, which is, perhaps, the most common complaint about this approach. Requests for information (RFI) and requests for technology (RFT) are typically short versions of RFPs. Organizations requesting bids or estimates from vendors issue RFIs or RFTs, which require only ball park figures and sketchier descriptions from bidders.

#### **When an RFP Is Needed**

RFPs give organizations detailed information about the prices, features, and conditions of various systems and services available on the market. Clearly, however, not all systems and services need to involve an RFP, which is often a long and fairly involved process. Relatively inexpensive investments are best carried out with RFPs, for instance. If an investment can be expensed or written off within a department's annual budget, the dollar amounts are small enough that it is likely that an RFP would not be cost-justifiable.

#### **STRUCTURING THE RFP PROCESS**

While planning an outsourcing decision, the RFP itself must not be the starting point. The process should begin with a series of steps, starting with analyzing the internal climate of the organization where the information technology project is to be implemented. These steps are identified in (19). The common element in all successful RFPs is structure—a well-defined process minimizes potential bottlenecks, makes the transition smoother, and raises the odds of selecting the right supplier (18).

#### **RESEARCH AND PLANNING**

The needs of the organization require documentation. How the currently implemented functions could benefit from an automation enabled by information technology should be addressed in specific terms relating to the outcome. If the organization is a bank, then how does the bank reduce the monthly closing by three days? How can information being shared with another department be automated to reflect changes in multiple departments? Such specific questions need to be raised. Concurrent with such analysis, current policies being followed should be documented along with procedures and needs. This not only raises the quality and usability of the RFP document, but also gives information to support the need for the project to management.

#### **MANAGEMENT INVOLVEMENT IN RFPs**

Management involvement in the RFP design process is essential, wherein background information collected from the previously described step helps evaluate the feasibility and financials of the project. Goals for the project should be explicitly outlined. For example, does it reduce costs, enhance flexibility of operations, free up some other resources, speed

transactions, or consolidate operations? This is essential to the full use of internal resources (18). It is this involvement of senior management which can help the project team relate the project to the bigger picture of the organization—how it relates to target markets, how it develops the core competencies of the organization or enhances them (19). Management involvement is also necessary during the following stages of maintenance of the implementation time frame and selection process.

#### **CREATING THE PROJECT TEAM AND SUCCESS METRICS**

This is the next critical step in the request for proposal (RFP) design process. A core team drawn out of the organizational divisions affected by the proposed change should be organized. Each team member represents an affected division of the organization, provides input into the project plan and during the selection, implementation and transition stages. It is this team that can help identify potential suppliers who can meet the organization's technology needs, for the outsourcing contract.

Inaccurate or incomplete estimates in the project's conceptual or preliminary stage can result in a higher overall capital cost (20), while overestimating the capital input can result in a reduced attractiveness of implementing the project in the first place, so all possible scenarios must be analyzed using a spreadsheet model, in case the project has potential for a major organizational change after its deployment.

The project team determines the project success metrics to evaluate the criteria on which the success of the project can be most reliably judged, both after and during implementation. For effective project management with an outsourced development team, five key performance criteria are suggested by Hartman (21). These are:

1. Simplified metrics
2. Streamlined project measurement
3. Development of conservative reporting tools
4. Faster information feedback to the project team(s)
5. Collection of data in reusable form

For the entire project, only one major tangible outcome will result, called the project deliverables. To enable streamlined measurement of progress, reporting should be done at the same level where the costs are incurred. Estimates for perfect, likely, and overrun costs should be developed while considering realities, risks, and opportunities associated with the project at various progressive stages. To avoid overpessimistic estimates, the project deliverables should be broken down into smaller elements according to predetermined criteria (21). Good, extensive, and relevant documentation by the actual team developing the project, in this case the outsourcing provider, allows a reasonable extent of reuse of the developmental analysis in related future projects.

#### **DEVELOPING THE RFP PACKET**

An RFP packet should be written in narrative format and divided into sections by product or service requirement. Besides a cover letter announcing the organization's RFP, it should

include such information as a company overview, outlines of financial statistics, and details on sales volumes and investment balances. The company's current policies, procedures, and needs should be explicitly stated while asking each potential supplier to describe its ability to meet those needs. An RFP need not specify a format for the response in all cases. Rather, it can allow potential suppliers to choose a format that best portrays its products and services.

The RFP should specify the selection criteria that would be used by the organization to select the final supplier. Information relevant to the project at hand from the specific divisions of the organization, within which the project is planned for implementation, often helps the suppliers feel more comfortable with the details needed to be able to respond to the RFP in a competitive manner. Details about specific divisions can also be sent with the RFP package.

A contact list for key individuals on the organization's team should be provided and a similar list requested from the responding organizations. Information about previous users of the vendor's services will allow the contracting firm to check out bids through reference checking and on-site visits. A clearly defined timetable for the project's implementation should be included as an attachment.

Since the RFP might not always provide all the information potential bidders need, and in case the number of bidders is high, an informational meeting can be arranged to answer common questions about the RFP. Such a meeting helps convince bidders that the company is serious about the plans and allows the bidding companies to put in more resources into the response to the RFP (22).

If the number of respondents is large, it is often more efficient to provide a structured format useful for drawing comparisons on preset criteria.

## SELECTION

The goal of the RFP is to allow the organization to choose the most suitable supplier based on the comprehensive and consistent criteria crafted by the organization sending out the request for proposals. The most important components of the selection criteria are technical criteria and costs. Respondents who could potentially qualify should be narrowed down and a team should be invited from each such potential supplier, to give a short presentation on their take at the given project (23,24). From the respondents who seem to meet the product and service requirements, fulfilled a required financial strength analysis, and other requirements like geographic presence, past record, and so forth, finalists should be identified by applying the same criteria used to the earlier selection iterations but in more depth. At this stage, suitable weights should be given to each supplier's strengths and put into a comparative form. Deficiencies in their proposed implementation and transition stages should be identified, if any. This should be accompanied by team discussions to select the final supplier.

Quantitative tools for analyzing this decision have been discussed earlier.

At this stage the need for management involvement arises again. This involvement should center around discussion of each potential supplier's strengths and weaknesses and each of the suppliers should be made aware of the analysis to en-

sure that they can clarify and correct any misinterpretations that might have resulted in the analysis stage.

## TRANSITION

Once the final supplier is selected, there is a need to move toward final resolution of terms with the vendor. Involvement of the legal counsel and stages of funds transfer should be decided upon. Negotiation of the intricate details in the contract, including the total project implementation time frame, should be adequately accounted for. It is at this stage that the original proposed timetable needs to be reviewed by a team from the selected supplier and made more realistic if any deficiencies exist.

## SYSTEMS AND SERVICES CONTRACTING

Given the fact that contract is "the only mechanism that establishes a balance of power in the outsourcing relationship," Lacity and Hirschheim (8) suggest that the companies should sign a tight contract with vendors to reduce the risk of opportunism. Some of the negotiation strategies they propose are:

- Do not sign incomplete contracts—sign contracts only after the details are clearly specified and defined.
- Hire outsourcing experts—both technical experts and legal experts—to measure services and protect your interests.
- Set out a baseline period for comparing current performance against benchmarks of future performance.
- Measure everything during the baseline period and document/measure the service volume fluctuations.
- Specify baseline services in the contract so that there are no additional charges so long as volumes remain within specified range.
- Develop service level measures within the service level agreements (SLA)—specify required service for each service level in terms of delivering a certain amount of work in a certain period of time.
- Develop service level reports—require the vendor to report on each service level measure.
- Specify escalation procedures—specify how to fix the problem when disagreement arises.
- Include cash penalties for nonperformance—insist on cash compensation for failure to meet service criteria.
- Include a termination clause—the terminating party must notify the other party within a specified time period.

## STAFFING SYSTEMS INTEGRATION

Organizations must dedicate adequate resources to the system integration effort. Vendors will behave opportunistically if they are not monitored. This is not to suggest that organizations should not trust or allow trust to build with their systems integrator. What it does mean is that someone in the client organization needs to be assigned the responsibility of managing and administering the contract. Service level agreements notwithstanding, they must ensure that their



own organization is getting a reasonable return on their investment. If the vendor is being difficult or unresponsive, the contract administrator will need to step in to protect the client firm's interest. This process of interacting with the vendor is often referred to as "relationship management" and it is a crucial part of outsourcing information technology.

Many talents and forms of expertise are required to successfully outsource systems. Good management skills are always a boon, of course. Persons who are able to scan the environment and determine where the organization should invest in new technologies play an essential part in good strategic planning. Ad hoc teams are often assembled to investigate the outsourcing decision, whether it is on a relatively small scale, such as the contracting out of a new application, or on a large scale, such as hiring out all telecommunication services. Preparation of an effective RFP is a specialized skill in its own right. Finally, negotiating a good contract usually takes the knowledge and talent of persons representing the end-user group (the group that will benefit most directly from the outsourced system or service), the systems function itself, and technology lawyers.

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LEI JIN  
GORDON DEPLEDGE  
AMRIT TIWANA  
DETMAR STRAUB  
Georgia State University