INTRODUCTION
While outsourcing some or all of information technology (IT) operations has been around since computers were first introduced into enterprises, IT managers are eyeing more current, compelling reasons to completely switch to an outsourcer. The purported advantages, including system flexibility, keeping current with technology, eliminating costly employee issues, and capital cost savings, point to what might be considered a self-evident decision. However, it is not as simple as that. This article explores several essential components of the decision to guide enterprise IT managers in gaining the advantages of outsourcing and avoiding the pitfalls.

OUTSOURCING DEFINED
Looked at from its most basic level, having a third party take over some or all of an enterprise’s IT operations is nothing new.

Many can recall the beginnings of the computer age, when enterprises turned to third-party technology firms to obtain contracted automated support. Known then as service bureaus, user enterprises were linked across town into their giant and very expensive computer. The enterprise’s employees accessed (or time-shared) their applications through dumb terminals. In many instances, operational and management reports were delivered the next day after overnight processing, and the service bureau generally dictated the tech-

PAYOFF IDEA
Under today’s definition of outsourcing, a range of services may be provided, ranging from one or two narrow areas such as hardware or software maintenance to a complete information utility such that the enterprise may just plug in and use the service, virtually without worry about staff, space, technology upgrades, and software bugs. The key to successful outsourcing is to understand one’s needs and the enterprise’s personality. Then, and only then can one choose the level of outside support that fits both.
nology the enterprise used and its pace of change. Pricing by the trans-
action served to escalate enterprise costs as the enterprise grew.

The fact that computer hardware costs spiraled steadily downward
made enterprise purchases of mainframe (and subsequently mid-range
and micro-) computers affordable. More critical, the need for immedi-
ate, less-expensive, and onsite IT management support forced computer
ownership (or leasing) to be a requirement of operating for most enter-
prises. Many service bureaus were replaced by a commercial product
marketplace that has expanded today to license highly flexible and in-
dustry-specific software at a more affordable price using less-expensive
computers.

The advent of networks, the push for application integration, an ever-
increasing chip capability and speed, and the advancement of data com-
munications technologies now places the IT executive in a very complex
and fast-changing world. Words and acronyms like 4GL, token ring topol-
ogies, multiplexers, hubs, concentrators, and T1 lines have become a part
of the everyday lexicon for the IT community. However, keeping up at
the IT management level can be frustrating and costly. These otherwise
highly capable IT executives can be forgiven if an outsourcer promises
relief from dealing with another area of complexity.

WHY ENTERPRISES SHOULD CONSIDER OUTSOURCING

Every day there is a new announcement of an IT product or IT service that
someone in an enterprise believes is absolutely necessary for long-term
(or short-term) success. Staffing and retaining the personnel to provide the
needed support is a difficult and costly effort, especially when the needs
are for just a few days per month for a dozen or more specialties.

Somewhat like legal or financial services, IT services are best provided
through a custom blend of internal and external professionals. This arti-
cle gives some guidelines on how to plan and develop the right mix for
an enterprise through outsourcing, as well as the reasons for doing so.

Outsourcing Reasons

Private industry and the federal government have numerous reasons for
outsourcing. In descending order of importance, the following are rea-
sons for outsourcing IT services:

- focus in-house resources on core functions
- personnel cost savings
- improved quality of IT systems services
- increased flexibility
- increased access to new technology
- provide alternatives to in-house costs
- stabilize IT costs
MAKING THE DECISION TO OUTSOURCE IT

• technology cost savings
• reengineer process
• reduce technological obsolescence risk

IT managers have similar reasons for outsourcing. These reasons can be combined and categorized as follows:

• budget realities
• cost reduction
• access to skilled personnel
• improved IT responsiveness
• help with legacy systems
• improved enterprise and customer service
• implement new architecture

Budget Realities and Cost Reduction. Budget realities and reducing costs are clearly a significant concern for both the federal government and private industry. Four of the ten preceding reasons dealt with cost savings of one type or another. Budget restrictions are the controlling factors in the federal government and private environment and have a key impact on deciding which functions to perform in-house versus which to outsource.

Federal government and private sources have determined that outsourcing is an excellent method to produce savings. The Heritage Foundation has estimated potential savings at 20 to 30 percent. The Congressional Budget Office estimated in 1998 that between 50 and 70 percent cost-savings could be achieved through outsourcing. The potential savings make it feasible to consider outsourcing as a means of providing IT services.

Access to Skilled Personnel. Federal agencies and private enterprises need to consider access to skilled personnel. Federal IT agencies are experiencing a shortage of highly skilled and experienced personnel brought about by continued buyouts and early retirements. In addition, hiring freezes, loss of funding, buy-outs, and early retirement authorizations have prevented restaffing. Remaining employees may not always have the specialized skills or training to keep pace with the rapidly evolving technology. Additionally, technicians and programmers skilled in the most current technology and programming languages (C++, etc.) are often hired by commercial enterprises at salaries significantly higher than the government can offer.

Improved IT Responsiveness and Enterprise and Customer Service. Outsourcing is a means of improving IT responsiveness and enterprise/customer service. Federal agencies and private enterprises are taking
a closer look at their core competencies and how these services can be provided to the customer in a more efficient and effective manner. Federal agencies and private enterprises are also focusing their resources on the core functions that they do best — their mission. Outsourcing some functions provides federal agencies and private enterprises with the flexibility to strategically redirect those resources to mission-critical activities.

Outsourcing also enables a federal agency and private enterprise to potentially improve the quality of information systems services by obtaining those services from an enterprise whose primary mission is IT. An example is the current industry move to obtain certification using Carnegie Mellon University’s Software Engineering Institute (SEI) Capability Maturity Model (CMM). The SEI CMM rating validates that an agency or enterprise has put repeatable software development and program management processes in place in its projects/programs and in various levels of its enterprise. Few federal activities have the resources or funds to obtain the knowledge and skills required, implement the repeatable processes, and go through the certification process. However, these capabilities can be obtained from vendors whose core competency is to provide high-quality software development. Agencies and enterprises are finding that outsourcing gives them access to CMM that which they otherwise could not afford to develop in-house.

Help with Legacy Systems. Federal agencies and private enterprises are currently looking to outsource functions related to legacy systems. Many agencies and enterprises have large systems written in earlier computer languages such as COBOL. These programs are full of spaghetti code — the result of years of modifications to the code, some without adequate documentation. The programming challenges resulting from these undocumented programs are intensified by a lack of programmers skilled in the earlier languages. Although the number of legacy system programmers is limited, private industry has better access to people with these skills.

The year 2000 (Y2K) is an excellent example of federal agencies and private enterprises having to make major modifications to legacy systems. Contractors have developed tools and management processes to handle much of this reprogramming and reengineering effort. When Y2K was coming to the forefront, programmers with skills in the older languages were in high demand. Accordingly, they were demanding and getting higher compensation than the government could provide. Outsourcing Y2K projects provided federal agencies with access to the specialized tools, management processes, and personnel that private industry had available.

Implement New Architectures. Federal agencies and private enterprises are also looking at outsourcing as a solution and source to keep up with the increasing changes in technology. Private enterprises are
seen to have more leverage to acquire and maintain new computing/telecommunications resources at a significantly reduced cost than the federal agency can have directly. Private enterprises are also seen to be able to implement the new technology better and more quickly because of their focus on continuous technology refreshment.

Most large enterprises already have the vendor agreements in place — and the revenue volume necessary to take advantage of them — to provide continuously updated technology. The enterprise can spread the cost of this technology over several customers so that one customer does not bear the brunt of the entire technology upgrade.

THE BENEFITS OF OUTSOURCING

Along with eliminating time-consuming and sometimes costly employee issues like recruitment, retention, and other employee relations concerns, turning over an enterprise’s computer operations to a third party can also transfer the worries of:

- trying to avoid major computer failures, especially during critical database updates
- deciding among competing software products, which often become obsolete right after emerging from a lengthy, enterprisewide selection and contracting process
- staying abreast of the latest equipment and communications technology, which often requires frequent return trips to the enterprise’s finance committee
- overtaxing the IT budget due to unforeseen human resource or technology demands

Is the promise of outsourcing a guarantee? Not by any means. Yet many enterprises within commercial, public, and not-for-profit industries are considering, and indeed shifting to, outsourcing arrangements. Does the future hold this in store for your enterprise? If so, how does one go about evaluating and implementing the option? What are the risks?

OUTSOURCING RISKS

Still, while the trend is turning back once again toward outright outsourcing of the entire IT function, it is causing many IT executives to wonder: Are we returning to the service bureau arrangement? Their concern is valid since the old service bureau arrangement was rightly branded as too expensive and too technologically rigid. So is it a return? In a sense, yes and no.

Yes in the fact that outsourcers are third parties and are providing IT support under a contracted arrangement. No in the aspect that the association is not limited by an inflexible outsourcer marketplace providing
only certain technological options at a certain price. Therein lies the key to making an outsourcing arrangement work for an enterprise — the customized contract that reflects the enterprise’s most appropriate technological needs and grows with the enterprise in a controlled manner.

**Outsourcing Risks Concerns**

Private and federal IT managers historically have been resistant to the idea of outsourcing, citing concerns for security, control, corporate knowledge, and reversibility once a function has been outsourced. While these are legitimate issues that must be addressed, a well-organized and differentiated approach to IT outsourcing can overcome these concerns and ultimately enhance the IT decision-maker’s position.

**Control.** Critics of IT outsourcing argue that an outside vendor cannot match the responsiveness and service levels as that done by an in-house IT function because the outsider is not subjected to the same management direction and control as federal or private enterprise employees. The major reason for this concern may be that federal and private enterprise IT managers historically have not been required to apply success metrics to vendors or to internal operations. IT managers will now be required to benchmark the performance of their systems against commercial activities and develop metrics for their internal operations. Once developed, these metrics can easily be used to measure and control an outside vendor’s performance.

Similarly, there was little pressure to, or knowledge about how to, write performance-based statements of work. In addition to becoming more adept at measuring and benchmarking their internal activities, federal agencies and private enterprises will become more comfortable at managing performance-based contracts instead of simply managing people and activities. As this experience and knowledge grows, loss of control will diminish as an objection to outsourcing.

**Security.** Federal agency and private enterprise concerns regarding the security and confidentiality of data and other information are important. Both Congress and the Office of Management and Budget (OMB) consider information security to be an overall concern and are working on issues for federal agency implementation. However, the OMB also recognizes that activities that may require access to secure and sensitive information may be contracted out.

Outsourcing has been in effect in private industry for a number of years. Commercial enterprises such as banks, brokerage houses, insurance enterprises, and enterprises with extensive research and development activities have designed processes by which their most closely held information is often processed in an outsourced environment.
Contractors have long operated in the most secure environments in government and industry. The language in secure environment contracts requires contractors to take the necessary precautions. In addition, contractors working in such situations are often required to establish and promulgate security procedures with the appropriate federal agency and private enterprise auditing compliance by the contractor and the contractor's personnel.

Enterprise Knowledge. Another concern of outsourcing critics is that outside vendors’ lack of enterprise knowledge will prevent them from performing as well as insiders who are familiar with the agency or enterprise, its customers, its reporting requirements, and its idiosyncrasies.

Many agencies and enterprises are facing a loss of enterprise knowledge from their workforces. Personnel buyouts and hiring freezes have taken their toll on enterprise knowledge as knowledgeable and experienced staff have taken advantage of the many downsizing opportunities offered by the agencies and enterprises. At the same time, there have been no new staff hired and trained to take their places due to hiring freezes. Thus, agency and enterprise knowledge is being drained. Agencies and enterprises increasingly have to rely on the skills of service providers who are new to the arena, regardless of whether they reassign internal resources, receive authority for new staff hires, or outsource to contractor personnel.

If enterprise knowledge is a specific concern, then agencies and enterprises can base the evaluation and selection of outsourcing vendors on their past record of working closely with a customer in the customer’s environment. Additionally, close communication and cooperation between the contractor and the agency will facilitate contractors becoming knowledgeable in the critical areas.

Reversibility. Critics of outsourcing express concern that once IT functions have been turned over to a contractor, it will be too costly to reverse the situation and return them in-house. This concern is based on the assumption that once functions have been outsourced, the agency or enterprise will lose all of its critical skills and resources (hardware, software, etc.), will become locked-in to a particular vendor's proprietary hardware or software, or will have difficulty recompeting contracts if problems arise with service quality.

Although these are valid concerns, agencies and enterprises can use contractual requirements to address many of their concerns. As an example, a key person provision might be included in the contract requiring the contractor to keep certain, specifically named individuals assigned to the project. In other instances, federal agencies have included language in Request for Proposals (RFPs) that require the successful vendor to pro-
vide knowledge transfer back to the government. The use of award or incentive fee contracts is a good technique to avoid prematurely recompeting a contract or bringing it back in-house.

Concerns with a vendor's proprietary hardware or software, or of not having title to, and the use of data generated under the contract should be addressed during the requirement's analysis phase of the outsourcing effort. Appropriate language can be drafted assuring the agency or enterprise of interoperability of equipment/software and of the retention of all necessary intellectual property (escrow of source code, conversion of data to any follow-on system, etc.).

Finally, big bang or grand design contracts probably work no better for outsourcing situations than they did for large system development projects. If the IT functions being outsourced are of a critical enough nature to the agency's or enterprise's mission, then the agency or enterprise should seriously consider awarding several small contracts for various, severable functions. Likewise, such an incremental or modular approach can be effectively used where the agency or enterprise lacks outsourcing experience.

**HUMAN RESOURCE (HR) CONCERNS**

A key element of any outsourcing/acquisition effort is cooperation and participation by the human resources (HR) staff. An enterprise must get its HR staff on board as part of the outsourcing/acquisition team from the very beginning. With HR involvement, the status of any discussions concerning outsourcing should be communicated with the employees and with the union(s).

HR helps an outsourcing study team to ensure that all relevant issues have been raised and considered, and that information is prepared and available for employees. The study team needs to have information on issues such as the number of affected employees, transition costs, retraining opportunities and obligations, termination costs, relocation requirements, etc. Employees will want information on issues such as job status, benefits, timing of any outsourcing and how it affects retirement possibilities, potential buy-outs, etc.

**CHALLENGES TO OUTSOURCING**

Once the decision to pursue outsourcing has been made, IT management and the outsourcing study team will be faced with numerous challenges. Political opposition to the potential outsourcing may come from internal sources, unions, community leaders, and possibly other contractors, who may be affected by the outsourcing decision. Senior IT management should communicate with internal or external groups. This communication should begin as early in the process as possible and continue periodically.
WHAT TO EXPECT FROM AN OUTSOURCING VENDOR

Outsourcers today are very flexible in their service arrangements. They will:

- take over and occupy an enterprise’s data center
- move the enterprise operation into their data center
- manage enterprise software in their data center or the enterprise’s data center
- develop new applications
- purchase the enterprise’s hardware and software
- employ some or all of the enterprise’s employees
- allow the enterprise to manage or not manage their employees

There are, of course, many variations on the preceding and other themes.

KEYS TO SUCCESSFUL OUTSOURCING

No one wants to fail nor sets out to do so. Keeping in mind a couple of guideposts helps avoid the potential problems. First, know thyself. What software components are potential outsourcing candidates? What shape are they in? What are the documented requirements for these applications in terms of operating demands, reporting, and processing? How much do applications now cost in terms of staff and nonpayroll components? What advantages (cost- and operations-wise) would one expect to achieve from their conversion to an outsourcing arrangement? The answers to these questions will help point the way to evaluating whether or not outsourcing is a viable option.

If so, convert these factors into contractual requirements. Let enterprise expectations be known and seek out reputable outsourcing enterprises to address these requirements in a competitive and formal manner.

Next, go slow. For some enterprises, this will represent a cultural change that takes some getting used to. A slower introduction might be the best way.

Finally, find that key employee or consultant who can be dedicated to the conversion process to oversee that the change meets the expectations that are in the contract. In the long run, this type of investment is worthwhile for the future survival of the enterprise.

FUTURE OUTSOURCING TRENDS

The outsourcing industry has changed much over the past decade. These changes are reflected in the trends that now shape the next 10 years of outsourcing.

Business Process Outsourcing

The IDC estimates that business process outsourcing (BPO) services currently claims 70 percent (or nearly $70 billion) of all outsourcing spend-
ing worldwide, and non-IT executives throughout the industry are quickly waking up to the idea of outsourcing non-core functions. The next iteration is electronic BPO, as small to midsize enterprises that do not have the wherewithal to launch their own E-commerce ventures present a hot new marketplace for IT vendors that do.

The Fall of the Outsourcing Broker
As enterprises gain outsourcing experience, they are reluctant to hire middlemen to broker their deals. Customers do not want to spend $360,000 to $2 million for third-party negotiation. And they shouldn’t! However, outsourcing deals are bigger and more complex than ever and require a specialist’s expertise. The real future, therefore, for outsourcing middlemen, is in relationship management during the life of the deal.

Global Growth
According to the IDC, outsourcing will top $262 billion by 2004. This trend signifies both a greater market share to be grabbed by outsourcing vendors, as well as an opportunity for remote enterprises to boost their IT/enterprise capabilities and become world-class competitors. With one swipe of a pen, a small enterprise will have access to the same global resources as a big enterprise. It will be difficult to tell the smaller enterprises from the larger ones.

CONCLUSION AND SUMMARY
Outsourcing is emerging once again as a way to manage the technology necessary to serve today’s IT requirements. Enterprises look to their systems to manage IT to the benefit of the enterprise’s purposes; and, there is a constant search taking place to enhance the speed and quality of the systems. Each enterprise must answer for itself how it will structure these systems to optimize their assistance to the enterprise, and to do so in a cost-effective manner. It is advisable for enterprise IT executives to look closely at the outsourcing option.

Furthermore, the popularity of outsourcing continues to gain momentum in both the private and public sectors. Private enterprises are turning to outsourcing for a wide range of functions — from logistics to human resources to purchasing. The government is being forced to seriously consider reliance on outsourcing as well. At one time, government outsourcing was primarily applied to contracts for blue collar-oriented functions such as maintenance, security, and food services. However, the government is finding it necessary to follow the commercial trend to outsource white collar-type functions as well, including IT functions.

The outsourcing trend has accelerated as U.S. enterprises have endeavored to become or remain competitive in the global economy. To do so, enterprises are focusing on their core competencies.
This drive to focus on core competencies is fueled by a desire for private enterprises to provide better customer service, while at the same time increase profit margins. While government agencies are not concerned with profit motives, per se, they are increasingly driven to focus on delivering responsive service to the customer within shrinking budgets. Outsourcing represents one way for federal government IT managers to perform the seemingly impossible task of improving service in the face of declining funding and staffing.

Aside from focusing on core competencies, the reasons for benefits being obtained from improved efficiencies are many. It appears that enterprises that outsource for long-term strategic reasons are often more satisfied with the outsourcing results than those that outsource for short-term tactical reasons. As an example, outsourcing benefits those enterprises that have the foresight to take the time to “benchmark” the services required and place measurable, performance-based requirements into a Performance Work Statement rather than rely on a Statement of Work, which describes the exact steps a contractor is to follow. Additionally, building flexibility into the contract is beginning to be seen as a basic tenet of outsourcing — especially in the IT world, where requirements change quickly.

Finally, in the private sector, outsourcing can usually be accomplished quickly once the decision to do so has been made. In the public sector, federal officials must maneuver through what often appears to be a quagmire of rules and regulations, although Congress has passed several pieces of legislation to facilitate and promote outsourcing in the IT arena. The most notable of these, the Information Technology Management Reform Act (ITMRA), requires agency heads to determine the appropriate sources of goods and services for new IT systems. On the other hand, agencies and enterprises must remain mindful of the political considerations of making outsourcing decisions.

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