The Benefits of Outsourcing an Increasingly Complex IT Environment

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INTRODUCTION

What do companies need to manage an increasingly complex ebusiness infrastructure in today's IT environment? How can technology help companies compete more effectively? Should companies attempt to manage these ebusiness infrastructures internally or outsource? These are the questions many businesses are asking themselves, particularly during these tough economic times when IT budgets are being scrutinized.

Couple the investments corporations have made during the past few years in new infrastructure with their existing legacy platforms, and companies in today's IT environment can often look like a technology showroom, with a variety of devices and applications as well as a growing Internet and Web-based infrastructure. Combined with the demands that both employees and customers place on these systems, the process for making an investment decision about how to support this environment can be quite daunting.

The decision-making process involves a broad range of factors, including how scalable the infrastructure should be to support customers; how flexibly an outsourced provider can meet unique needs; and how quickly a particular technology will become obsolete, just to name a few.

Even with a sensible ebusiness strategy, you may face challenges integrating your ebusiness infrastructure with legacy systems, expanding geographically, and supporting an increasingly mobile workforce. Perhaps most important, you may not have the resources — time, personnel, or financing — to do it all yourself.

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The Challenges of Internally Managing an eBusiness Infrastructure

Enterprises face a number of challenges in managing their own ebusiness infrastructure. Some of the "pain points" that these firms may experience in managing this increasingly complex infrastructure are driving many enterprises to outsource their systems to an external service provider. These may include:

- Reducing costs and maximizing investments to obtain a greater return on investment (ROI)

- Providing a scalable, secure, reliable, and highly available ebusiness infrastructure that minimizes costs while maintaining or increasing service quality

- Providing adequate security measures for protection against continuing security vulnerabilities

- Managing and integrating a multitude of best-in-breed service providers and product vendors to support the highest degree of service delivery

- Controlling network and systems complexity and planning for technology upgrades while delivering continuous service across an increasingly expanding infrastructure

- Competing in an environment where rapid time to market and expanded geographic reach are critical to success

- Maintaining or increasing customer satisfaction

The combination of these pain points and the challenge of hiring, retaining, and managing a highly skilled technical and operations staff leads many enterprises to lose focus on their core competencies. Recognizing the complexity and difficulty of successfully managing all of these challenges is the first step.

Cost Considerations

The cost of developing and managing an ebusiness infrastructure can be staggering. The significant capital investment required to provision all the necessary hardware, software, and operations facilities (e.g., management centers and datacenters), while developing the appropriate skill sets to design, build, and operate such an environment, is increasingly more than most enterprises can afford. IDC believes these costs can be broken into the following four major areas:

- **Facilities.** Supporting an ebusiness infrastructure for ongoing operations includes an initial investment to develop an Internet datacenter in which the systems and associated networks can be

housed. In addition to the necessary fees required to maintain these facilities, enterprises will need to develop the appropriate operations management centers and maintain and monitor these facilities around the clock. The up-front capital investment required to build these facilities is prohibitive for most enterprises.

- **Staffing.** The staff required to manage an ebusiness infrastructure includes engineers with expertise in systems, servers, storage, networking, Internet technologies, and operating systems. In order to achieve consistency in implementing and maintaining this infrastructure, the enterprise should have personnel document best practices and processes as well as project managers that can coordinate all parties involved in supporting the environment. Further, with the need for protection from cyber hazards, enterprises will need to have a set of well-trained security engineers on hand as well.

- **Technologies.** The array of technologies utilized within an ebusiness infrastructure includes a vast set of equipment such as network devices (e.g., routers, switches, and firewalls), servers (e.g., application, distribution, database, and Web), operating systems (e.g., Unix, NT, and Linux), and storage devices (e.g., storage area networks and network attached storage). Typically, enterprises also have to support a range of technologies from a variety of vendors, such as Sun, Microsoft, Oracle, IBM, and Hewlett-Packard. Finally, enterprises must manage all software licenses including operating systems, systems management, databases, and applications.

- **Services.** Managing an ebusiness infrastructure requires leveraging relationships with other service providers in areas such as bandwidth provisioning, application development, and maintenance.

The potential cost savings associated with an outsourcing engagement can depend on a variety of factors. Generally, a company considering whether or not to outsource should compare the explicit cost of outsourcing — the direct cash outlay — with the costs of keeping the function in-house to understand the potential cost savings. Many enterprises are recognizing that the significant capital investment of managing the ebusiness infrastructure in-house is a barrier that cannot be ignored.

However, within the scope of a cost-benefit analysis, IDC believes it is critical to consider additional benefits of outsourcing, such as access to new technologies, skilled workers, guaranteed service levels, the ability to increase focus on core competencies, and improved time to market.

Who Outsources?

After considering the challenges and costs of managing such a complex environment internally, many companies, not surprisingly, turn to external service firms to assist in the development and management of their ebusiness infrastructure — from the network to applications.

IDC's *eWorld 2001 Survey*, which examined the buying habits of 1,650 IT decision makers, found that less than half of all enterprises manage their own Web applications internally. In addition, the study also found that 92% of organizations using infrastructure management services from an external vendor plan to either increase or maintain the value of their contracts over the next 12 months. Of those firms not currently using an external service firm to manage their infrastructure on an ongoing (24 x 7) basis, an additional 7% plan to migrate to a managed service provider over the next 12 months.

Overall, IDC predicts that spending on IT outsourcing services worldwide will produce a five-year compound annual growth rate (CAGR) of 12%, exceeding $100 billion by 2005. While this figure varies across industries, it is clear that a large number of enterprises are turning to outsourcing as a solution for managing and operating complex ebusiness systems.

By relying on an external service provider, enterprises are able to focus on their core competencies while lowering costs. This allows an enterprise to not only channel its resources toward business issues and focus on developing a competitive advantage but also enhance its top-line revenue opportunities as well as bottom-line profitability.

Ultimately, the decision to outsource a firm's ebusiness infrastructure comes from the reality that most enterprises do not have the resources — time, personnel, or financing — to manage such a complex infrastructure internally.

Benefits of Outsourcing

With any outsourcing engagement, there are a number of benefits to the customer. In today's economic climate, one of the primary benefits is the potential cost savings and ROI. According to research conducted by IDC, enterprises can experience an ROI of 15–75% within the first year of an outsourcing agreement, with most seeing savings of approximately 40%. Although individual company's needs can differ dramatically, enterprises should carefully consider a number of benefits beyond financial returns, including:

- **Ability to focus on core competencies.** By handing over non-core activities, such as ebusiness infrastructure operations management, to a trusted third party, an enterprise can focus on activities central to its value proposition and increase its competitive positioning. This enables businesses of all sizes to maximize the value of resources they have in-house in order to focus on mission-critical business issues.

- **Higher-quality service.** Service providers' economies of scale combined with service-level guarantees often translate into increased operational efficiency for an enterprise. For example, outsourcing providers typically offer service level agreements (SLAs) for availability of at least 99.9% and often include financial penalties for downtime. Combined with higher-quality service, many outsourcers claim to reduce cost of management by as much as 25% for the customer.

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- **Increased accountability.** Through financially based SLAs, an enterprise customer can expect greater accountability from a service provider than from an in-house team. This greater level of accountability is further strengthened by the enhanced systems in place that enable customers to monitor accountability, which can be challenging to do in-house.

- **Access to new skills and best-in-breed technology.** Outsourcing affords a company access to resources not available internally, such as testing and research on the latest technologies, as well as skilled human capital. The value of these resources enables customers to maximize their staffs' time to focus on core business issues.

- **Greater flexibility.** The flexibility gained through outsourcing helps an enterprise react quickly to changing market conditions, fluctuating demand cycles, and increased competition.

- **Lower long-term capital investments.** In a typical outsourcing contract, the vendor takes ownership of and responsibility for managing all or part of the client's ebusiness operations or infrastructure, thus eliminating the client's ongoing investments in computer equipment. Additionally, the ability of the provider to maximize technologies by consolidating the infrastructure will further reduce investment costs.

- **Improved predictability of costs.** Outsourcing provides a company with predictable yearly costs for the management of all or part of the infrastructure. This enables an enterprise to develop long-term expense planning, which is critical for firms focused on the bottom line.

- **Assistance with organizational changes.** A third-party service firm can help build new infrastructures or assist with the integration of two or more existing infrastructures during or shortly after a merger, acquisition, or joint venture. This also holds true for business units within an enterprise that are looking to consolidate their infrastructures to reduce operational costs.

- **Assistance with globalization.** Any company looking to move into international markets can rely on a global outsourcer that can leverage a global infrastructure for assistance in broadening operational reach.

IDC believes that outsourcing ebusiness infrastructure addresses many of the pain points previously noted. By leveraging a trusted third-party service provider, an enterprise can be assured of a scalable, secure, up-to-date ebusiness infrastructure at a more predictable cost. Consequently, enterprises can leverage outsourcing to reduce costs, focus on core business functions, and improve competitive advantage.

Traditionally, third-party management of the ebusiness infrastructure (e.g., servers, networks, and storage) has been provided as an onsite service and is commonly referred to as "traditional" outsourcing.

However, the emergence of the Internet and a broad array of enabling technologies is shifting the delivery of these outsourcing services, which are frequently called managed services, into the Internet datacenter. These services are then delivered back to the customer.

This shift is giving rise to the provisioning of these outsourced services as a set of utility services, similar to electricity and power, in which customers purchase computing services based on capacity and usage. These various options will likely put the customer in the strong position of being able to select just the services they require while paying for just those that they utilize.

Assessing the Alternatives: What Are the Options for Outsourcing eBusiness Infrastructure?

The options available to enterprises that want to leverage an external service provider to manage their ebusiness infrastructure are highlighted in Table 1. Though the offerings shown are slowly converging, the market is primarily segmented into three groupings: colocation and basic hosting, fully managed outsourced services, and traditional outsourcing.

Colocation and Basic Hosting

Colocation services generally involve the service provider giving customers floor space and rack space, redundant power supply, environmental control systems, physical security, and bandwidth. The customer then leverages these services to bring in its own IT equipment, managed by either the customer or the customer's own service provider. Colocation services may also include some value-added services involving security monitoring, content distribution, reporting, and load balancing.

Fully Managed Outsourced Services

Managed outsourced services elevate the degree of services provided to customers from basic colocation to managing the customer's IT and network systems. Managed service providers typically take responsibility for systems such as databases, Web servers, application servers, and even custom applications. Additionally, managed service providers typically offer consulting and integration services that help customers get their systems production ready and maintain them through ongoing operations. It is at this level of service that the customer begins to transfer significant levels of responsibility to the outsourcer. Increasingly, as part of these services, many outsourcers provide the equipment on a lease or vendor-owned basis. However, many times, customers own and manage elements such as the application.

Table 1: Internet Operations Outsourcing Service Options

	Colocation and Basic Hosting	Fully Managed Outsourced Services	Traditional Outsourcing
Staffing	Does not take control of customer IT and network staffs; uses internal staff	Does not take control of customer IT and network staffs; uses internal staff	Will take control of customer IT and network staffs
Service delivery location	Delivered from a remote, third-party Internet datacenter	Delivered from a remote, third-party Internet datacenter or customer site	Generally at the customer site
Service options	Floor space, rack space, redundant power supply, environmental control systems, physical security, bandwidth, security monitoring, content distribution, reporting, load balancing	Design, integrate operate IT and network systems (not including LAN/PC environment) with associated SLAs	Design, integrate operate IT (including application management) and network systems (LANs/WANs) as well as access devices (e.g., desktops, PDAs, laptops) with associated SLAs
Payment	Monthly payment based on package or per device	Payment is generally based on a 12–36 month contract and determined by per-device or per-package charge	Payment is generally based on long-term contracts from 3–10 years and involves per device to MIPs charges
Application focus	None	Generally Web-based	All applications

Source: IDC, 2002

Traditional Outsourcing

Traditional outsourcing generally involves a long-term, contractual arrangement in which a service provider takes ownership of and responsibility for managing all or part of a customer's information systems infrastructure and operations based on an SLA. These services typically involve managing the full spectrum of the infrastructure from datacenters and systems to applications and desktop environments. In addition, these services generally include the transfer of staff from the customer to the service provider.

WHAT TO LOOK FOR: GUIDANCE IN EVALUATING OUTSOURCERS AND SERVICE PROVIDERS

If it turns out that outsourcing is appropriate for a particular organization, the next hurdle is to select a provider that fits the enterprise's specific needs. In the search for an outsourced service provider, companies must check references. Although this is a truism, it cannot be emphasized enough in this emerging market. Most likely, the contract will specify a one- to three-year period. Therefore, it is critical to select a provider that is willing to work with the enterprise customer as it undergoes changes over the next several years.

As part of the selection process, IDC has identified a broad set of criteria that should be considered when evaluating outsourcers and service providers. These include:

- **Proven, documented processes and methodologies.** Those outsourcers that have developed best practices and incorporated them into documented processes and methodologies will likely provide a higher quality of service. These practices should also enable the outsourcer to incorporate new processes and technologies more quickly and at a lower cost.

- **Protection against continuing security vulnerabilities.** The continued security threats, such as viruses, distributed denial of service (DDOS), and intrusive attacks, must be addressed appropriately. Therefore, outsourcers must provide an end-to-end managed security capability that is backed by deep expertise across the entire infrastructure, including storage, databases, networking, systems, and both Web and application servers.

- **Flexibility in solution.** Outsourcers must offer flexible solution packages that enable customers to select services both on an as-needed basis as well as at an incremental level. A service provider that offers flexible options to choose from can support the changing business needs of its customers and enable them to compete more effectively.

- **Ability to leverage automation to maximize service quality and reduce costs.** Those service providers that integrate automated processes and technologies will more likely provide a higher quality of service at a reduced cost. In addition, leveraging automation technology should contribute to improved uptime and time-to-market needs of customers.

- **Near-100% uptime SLAs with financial terms that motivate providers to solve problems quickly.** Outsourcers need to provide customers with service continuity-based, near-100% uptime SLAs and must offer a certain level of financial incentives, such as service credits, as part of these SLAs.

- **Stability and staying power.** Perhaps the most critical attribute in the eyes of customers in today's economic climate is financial stability. In the world of providing outsourcing or managed services, this attribute is crucial because the customer is dependent on the outsourcer for supporting its business processes on an ongoing basis. Any failure by the outsourcer could directly affect the business operations of the customer; therefore, it is important to have direct knowledge of the outsourcer's current and long-term financial condition.

- **Established, strategic partnerships.** Providers should have established partnerships with "best-in-breed" hardware and software vendors as well as services firms. Partnerships with these vendors will help support meeting critical SLAs and support premium service delivery. Areas of consideration should include hardware for networks, servers, storage, and security as well as software for operating systems and middleware.

- **Customer service.** Customers should seek a provider that offers strong customer service, including an intuitive customer interface, such as a Web portal. This service also includes test and stress lab capabilities because these services create a contact point with the customer from which customers can experience firsthand the real capabilities of the provider. By focusing on a provider with a robust, Web-based, user-friendly interface, the enterprise will be able to monitor its ebusiness infrastructure on a continuous basis and will allow it to assess future needs.

- **Ability to leverage best-in-breed technologies.** Managing customer systems and networks requires supporting a heterogeneous environment. To achieve this, the outsourcer must have knowledge, skill sets, and certifications across a vast array of technologies. Meeting this requirement demands that the service provider has a significant pool of available experts who can understand, research, and evaluate new technologies.

- **Single point of contact.** It is critical for a provider to offer a single point of contact. Because the customer is focused on minimizing the complexity of its ebusiness infrastructure, it is essential to have a single service provider to contact. Essentially, the service provider must be the single point of contact having ownership over all facets of the ebusiness infrastructure.

LOUDCLOUD INC.

Loudcloud was founded in 1999 by some of the Internet's early innovators, including Netscape cofounder Marc Andreessen and former Netscape/AOL executives Ben Horowitz, Tim Howes, and In Sik Rhee. The company is a managed service provider that delivers a suite of managed services for large-scale, complex ebusiness. A key element in providing these services involves leveraging Loudcloud's proprietary Opsware™ automation technology to support the scalability and reliability needs of its customers. Table 2 provides key corporate highlights and statistics.

DIFFERENTIATION AND ADVANTAGES

The company's value is to help customers cope with the challenges of operating their own ebusiness infrastructure. Leveraging its existing processes, operations expertise, and unique automation technology, Loudcloud offers reliable Internet operations that save customers money and improve time to market.

Loudcloud's key differentiators lie across three critical areas.

Service Quality

A key differentiator for Loudcloud is its focus on service quality. The results of this focus can be seen in Loudcloud's ability to successfully support a number of high-profile events, including the Super Bowl for FoxSPORTS.com. The site supported more than 1.4 million visitors during the game and served up nearly 3.6 million page views, which broke its all-time high by more than 300% since the site's relaunch last fall.

Table 2: Loudcloud Corporate Overview	
Category	**Data**
President and CEO	Ben Horowitz
Headquarters	Sunnyvale, CA
Total revenue FY '02	$56 million (as of FY ending 1/31/02)
Total employees	Approximately 400
Customer examples	Adidas, Fandango, Ford, Knight Ridder Digital, Network Appliance, Orbitz, USATODAY.com
Datacenter presence	7
Sales offices	10, including UK and Germany

Source: Loudcloud and IDC, 2002

Enhanced by its proprietary Opsware automation technology platform, the key components underlying service quality involve the following:

- **Commitment to customer service.** Loudcloud has demonstrated customer commitment according to the results of research conducted by a nationally known market research firm. The results indicate that 80% of Loudcloud's customers have purchased additional services from the provider, and 95% of customers would recommend the firm to others.

- **Experienced personnel.** Loudcloud personnel have an average of eight years each of ebusiness operational experience from leading firms such as AOL, Accenture, Cisco, CSC, Ernst & Young, IBM, Microsoft, and Oracle. The depth and experience of such personnel contribute to the increased likelihood of a higher quality of service.

- **Technical operations center expertise.** Loudcloud is able to identify and resolve problems quickly, as evidenced by internal metrics as supplied by the firm in Table 3. These include problem assessment in an average of five minutes and problem resolution in an average of 15 minutes.

- **Service level agreements.** Loudcloud offers a 100% uptime guarantee with service credits accumulating from the first minute of downtime. With the Loudcloud SLA, customers' needs for service availability and quality are translated into SLA guarantees optimally aligned with the response to individual downtime incidents for each site component. Instead of relying upon basic SLA guarantees structured around end-of-the-month availability statistics (typically represented by "number of nines"), Loudcloud's SLA includes a 100% uptime guarantee. Problem resolution steps are clearly defined for each type of outage and trigger accelerating financial penalties for Loudcloud. Aggressive time-to-repair guarantees are backed by strong financial remedies, creating strong incentive to get problems fixed rapidly.

Table 3: Key Problem Identification and Resolution Metrics

Metric	Result
Problem identification	
Mean alert response time	1 minute
Mean time to initial customer notification	5 minutes
Problem Resolution	
Problem assessment	5 minutes
Problem resolution containment (no escalation)	90%
Mean time to resolve outages	15 minutes

Source: Loudcloud, 2002

Range of Managed Service Offerings

- **Managed services.** Loudcloud's range of managed services includes storage, databases, application servers, Web servers, load balancing technology, and firewalls. This range of services allows Loudcloud customers the flexibility of choosing the exact services and levels of services required to support their business.

- **Multiple and flexible levels of engagement.** Loudcloud can deliver its fully managed service offerings at multiple price points, as well as discrete professional service engagements to meet varying customer needs.

- **Datacenter leverage.** Loudcloud leverages datacenter space in a series of third-party datacenters. After a customer has developed an application, Loudcloud plays the critical role of managing that application and operating the customer's ebusiness infrastructure including datacenter operations via its datacenter partners.

Protection Against Security Vulnerabilities

- **People.** Loudcloud employees with access to customer data must first pass stringent background checks. In the event of an incident, staff members work with the firm's most experienced engineers and systems administrators to form an interdepartmental Emergency Response Team.

- **Process.** Loudcloud conducts a predeployment security review of every customer site before declaring it operational. Loudcloud frequently scans its entire network for vulnerabilities to identify and remedy potential soft spots. Loudcloud's documented Incident Response Plan covers procedures for handling malicious events, including unauthorized access, disclosure of data, denial of service, and probes. These strict, documented security policies have been evaluated as part of Loudcloud's SysTrust certification and SAS 70 Type I and II reports.

- **Technology.** Loudcloud leverages multiple technologies to deliver the highest level of security to its customers. Loudcloud's Patch Management System provides automated patch updates and the ability to query numerous systems in seconds for vulnerabilities. In addition, Loudcloud's Security Monitoring System provides host-based intrusion detection services. Both are powered by Opsware automation technology, and Loudcloud also employs best-of-breed firewall, VPN, digital certificate, and IDS technologies.

Challenges

While Loudcloud boasts a rapidly growing customer base and revenue stream, the company does face challenges as it competes in the highly competitive managed services market. First, it competes against a number of larger, established players that have existing relationships with many customers. As a result, Loudcloud cannot compete on just brand recognition. It must continue to focus on delivering successful engagements with customers such as Ford, Knight Ridder Digital, News Corporation, and USATODAY.com.

Second, the current economic climate is forcing many potential customers to consider the financial backing of their outsourcing provider. As a result, Loudcloud must continue its pattern of demonstrating high revenue growth and improved cash flows.

Finally, Loudcloud has little room for making mistakes in the managed service marketplace. Given the mission-critical nature of customers' ebusiness strategy, Loudcloud must build upon its track record with customers to demonstrate that it is capable of delivering highly reliable, secure, and scalable services while providing the highest level of customer services.

HOW DOES LOUDCLOUD STACK UP?

An enterprise considering Loudcloud as its outsourced service provider for its ebusiness infrastructure should consider IDC's list of attributes and criteria discussed earlier. Table 4 shows how Loudcloud stacks up to IDC's list of success criteria.

Table 4: How Loudcloud Stacks Up Against Key Criteria

Attribute	Description	Pro	Con
Proven, documented processes and methodologies	Loudcloud offers strict, documented security policies and procedures for handling malicious events, including unauthorized access, disclosure of data, denial of service, and probes	Strict, documented security policies have been evaluated as part of Loudcloud's SysTrust certification and SAS 70 Type I and II reports	Must continue to refine processes and methodologies to meet customers' evolving needs
Protection against continuing security vulnerabilities	Ernst & Young LLP certified Loudcloud as compliant with SysTrust standards and prepared a SAS 70 report, evaluating its control over physical and logical access and system availability	Security expertise and established security processes and technologies	Loudcloud relies on third-party partners to provide advanced security services such as code reviews
Flexibility in solution	Offerings include tiered packaging as well as remote management and monitoring	Solutions are tailored to meet a customer's specific service needs	Slightly more complicated to buy since fewer "cookie cutter" solutions are available
Ability to leverage automation to maximize service quality and reduce costs	Loudcloud's Opsware automation technology is designed to capture Internet operations best practices in software with the goal of reducing errors and increasing quality of service	Automated operations ensure greater reliability, better security, and ability to make changes to the environment more quickly	Automation is currently limited to Internet operations within Loudcloud-managed datacenters
Near-100% uptime SLAs with financial terms that motivate providers to solve problems quickly	SLAs cover availability of entire site and include service credit penalties for noncompliance	SLAs are more robust than competitors and Loudcloud pays back customers with the first minute of downtime	Like competitors, SLAs exclude network last mile
Stability and staying power	Alliances with premier group of partners such as Accenture, Oracle; customers include Adidas, Ford Motor and News Corporation	Stable and established customers and partnerships	Company founded in 1999
Established, strategic partnerships	SunTone Certification; Cisco powered network; EMC proven E-infrastructure; IBM, Veritas; Qwest, Equinix, Microsoft Gold Certification	Best-in-breed partners to support quality of service and global reach. Aligns with customers' existing platforms and infrastructure environments	Limited experience in legacy applications and client/server environments
Customer service	myLoudcloud™ customer portal for 24 x 7 access to performance and activity reports	Provides 24 x 7 support and enables customers to respond in real time and control elements such as code pushes	May face challenges in scaling globally with its expanding customer base
Ability to leverage best-in-breed technologies	Has knowledge, skill sets, and certifications across a vast array of technologies	Engineers have experience, knowledge, skill sets, and certifications for various technologies	Reliance on datacenter partnerships has limitations
SPOC (single point of contact)	Takes responsibility for all infrastructure, hardware, software, and services vendors	Takes responsibility in delivering services and is the SPOC for all issues and customer concerns	Depends upon customer needs and specific contract

Source: IDC, 2002

The Benefits of Outsourcing an Increasingly Complex IT Environment

CONCLUSION: ASK THE RIGHT QUESTIONS

As enterprises turn to third-party service providers for their ebusiness infrastructure needs, IDC believes it is critical to evaluate service providers on their ability to manage these complex services, meet each customer's specific needs, as well as their ability to reduce costs. In order to begin the process of evaluating ebusiness infrastructure outsourcing, IDC recommends that companies ask service providers the following questions.

- How much return can be expected on the investment?

- What are the potential cost savings of outsourcing versus managing the infrastructure internally?

- How can outsourcing to a service provider help the enterprise achieve faster time to market or allow the firm to focus on actual new development projects?

- What are the SLAs provided, especially with regard to uptime and application access? Are penalties invoked if the service provider fails to meet these SLAs? Does the provider have incentive to help its customer for every type of problem?

- What are the security measures taken to protect customer data? What is the physical security of the datacenter, the network, and the servers? Does the provider have independent third-party certifications on their security practices?

- What types of support services are provided? Are "how-to" type questions supported? Who provides this support, and when is it available?

- Does the service provider understand its customer's business?

- Does the company offer a broad range of services that allows an enterprise to flexibly outsource just the pieces it wants to outsource and allows it to maintain control over the pieces it wants to control?

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