



***A White Paper  
By  
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***The Business Advantages of  
Utility Computing Services for  
Small and Mid-Size Organizations***

## Executive Summary

As information technology (IT) systems, software and networks get more sophisticated; unfortunately, they have also become more complicated. And, as they've become more pivotal to the day-to-day operations of organizations—large and small—they've also become more challenging to manage in a cost-effective and reliable fashion.

This IT management challenge is particularly acute for ***small and mid-size organizations (SMOs)—enterprises of 50-500 employees—that often lack enough in-house skills and resources to systematically implement and operate today's technologies and business applications.***

***Compounding this problem is the escalating number of Internet viruses*** threatening computer users and disrupting many businesses that don't have the right security systems in place or fail to regularly update their anti-virus software.

***Many organizations feel like they are losing control of their IT operations*** and certainly not getting the return on their IT investment (ROI) they expected. And, with the costs of managing technology escalating at a time when many SMOs are facing severe budgetary constraints, a growing number of organizations are looking for a new way to satisfy their IT requirements and reduce their IT costs.

These SMOs are tired of dealing with IT and want someone else to solve their IT problems. As a result, ***many are considering outsourcing their IT operations*** to an IT service company. While outsourcing can be an effective way of offloading the hassles of day-to-day IT maintenance, not every IT service company is capable of proactively managing a SMO's IT environment to minimize the risk of problems occurring and doing so in a cost-effective manner.

***Utility computing services*** have become an increasingly attractive outsourcing alternative for many SMOs. Utility computing services give organizations an end-to-end, turnkey IT solution that covers all their system, software, networking and security needs.

These ***services continuously monitor and proactively manage an organization's IT environment*** to anticipate problems before they occur, and optimize the day-to-day performance of end-users' systems to enable them to do their jobs better.

As a result, ***utility computing has increased the reliability and reduced the total cost of IT operations by as much as 50% for a growing number of SMOs.*** These tangible benefits have led the Wall Street Journal and Gartner, a leading IT research firm, to call utility computing one of the Top 10 technology trends.

*This white paper will describe the IT issues that are driving SMOs to adopt utility computing services; examine how these services work; show how these services are helping companies today; and provide a business case for SMOs trying to determine if utility computing services are right for solving their IT challenges.*

## SMOs Face the Frustrating Task of Managing IT

Although the computing needs of SMOs are far less complicated than the IT issues facing large corporations or non-profit institutions, IT complexity is still a major challenge for SMOs.

**System failures are more commonplace in many SMOs.** The threat of software viruses has become a continuous concern. As a result of these disruptions and threats, most SMOs spend more time reacting to IT problems rather than proactively leveraging the power of their IT investments to meet their business objectives.

**SMO executives are not sure if they are getting the best performance out of their IT systems and business applications.** After spending significant money and effort implementing hardware and software, many SMOs don't have the inhouse skills to properly configure their systems and applications to optimize their performance and get the best return on their investment (ROI).

For instance, many SMOs unintentionally overload their servers causing crashes that often lead to valuable data being lost. Others under-utilize their servers, costing them added expense and effort in unnecessary new equipment procurement, installation and maintenance. As a consequence of poorly configuring their servers, many SMOs are only getting 10-30% utilization of these devices, which translates into a poor ROI for this pivotal technology.

Even those SMOs that are able to improve the utilization levels of their equipment are often unable to monitor and measure the performance of their systems around the clock, and miss key indicators that would enable them to proactively manage their systems to prevent potential problems and costly downtime.

Despite sitting on under-utilized equipment in many cases, SMOs are expected to increase their IT spending 17% in 2003, compared with 1.3% growth among large companies, according to Forrester Research. Many SMOs have recognized they need outside help making the right IT investments and getting the most out of their technology.

Until recently, SMOs looking for outside help with their IT challenges had only two options,

1. Hire individual IT contractors to handle their IT issues on a part-time basis
2. Contract with an IT service company to fix specific systems and software

Unfortunately, **IT contractors often lack the knowledge, experience and tools to fully address SMOs' end-to-end IT requirements. And, most traditional IT service companies only react to problems, rather than proactively managing their customers' IT operations** on an ongoing basis to make sure it is performing at peak effectiveness.

Gartner has found that only 28% of SMOs have a strategic sourcing plan compared to 54% of large enterprises. As a result, Gartner has found that SMOs who do seek outside help still spend more than twice as much, or 29%, of the cost of contracting for outside IT services on simply identifying the right vendor or service provider, compared to large organizations who spend only 14% on the upfront costs of identifying the right IT source(s) to meet their needs.

**Utility computing services have become an attractive strategic sourcing alternative.**

## Defining Utility Computing Services

*THINKstrategies defines utility computing services as the automated delivery and management of computing power that can be acquired on a subscription fee basis.*

Just as public utility companies assure the continuous availability of their services, utility computing service companies assure the ongoing availability of their clients' hardware systems, software applications, and networking capabilities.

**Utility computing services permit SMOs to obtain a fully integrated IT solution** that can expand to meet their evolving business requirements. This makes more sense for many SMOs than sorting through a wide range of hardware and software products to support their business needs.

While this might sound like a simple concept, it requires three key components to be successful:

1. The right technology
2. The right skills (people)
3. The right processes

### **Utility Computing Technologies**

Unlike public utility companies that are vulnerable to occasional blackouts due to antiquated systems, utility computing service providers (UCSPs) rely on a set of sophisticated on- and off-site technologies to deliver highly reliable computing power. These technologies include,

- Network Management tools to proactively monitor hardware states
- Performance Management tools to effectively measure network, system, and software performance
- Software distribution tools to automatically update operating systems and applications from a central console
- Software diagnostic tools to perform system and software analyses, and self-healing techniques

Just as households don't build their own power plants to generate electricity, SMOs should not cobble together these new technologies to create their own complex computing environments. Instead, SMOs can turn to UCSPs that possess the expertise and experience to leverage these technologies, and have the IT management tools and skills to monitor their operations on a 24-hour, seven days a week basis.

### **Utility Computing Skills**

While many large corporations or major institutions with extensive IT staffs are deploying these technologies to create new information system architectures that solve some of their toughest technical challenges, these technologies are often beyond the budget limitations and skill levels of most SMOs.

And, even if SMOs could afford to buy these technologies, few have the in-house staff and experience to integrate these technologies into their existing IT environments without disrupting their business operations. SMOs also often lack specialists in email management, security, virus protection, server technology, and software technology. Equally important is the ability to monitor, measure and analyze

network and system levels to ensure optimum performance and prevent potential problems.

### **Utility Computing Processes**

Many SMOs also lack in-house IT staff skilled in all of the IT disciplines that ensure their IT systems and software operate effectively. These disciplines include scheduled software updates; hardware reconfigurations; security testing; system and storage backup; and network performance monitoring. Utility computing services perform these tasks on a continuous, automated basis.

**Utility computing service providers have experienced staff and sophisticated service delivery systems**, along with a structured set of deployment and ongoing management procedures that ensure the smooth implementation and optimized performance of the new utility computing environment.

In sum, utility computing providers rely on a combination of innovative technology, proven processes and experienced people to create a reliable, secure and cost-effective IT environment for their clients.

## **Traditional Outsourcing vs. Utility Computing Services**

IT outsourcing has become a popular alternative for many organizations attempting to solve their IT challenges. Rather than relying on their own in-house staff to manage their IT operations, in an outsourcing arrangement an organization contracts with an external service provider to assume responsibility for all or part of the IT function. In most cases, traditional outsourcing arrangements include the transfer of the customer's existing IT assets or staff to the outsourcer.

**A growing proportion of large corporations and major nonprofit institutions have recognized that IT is not their core competency and are outsourcing this function to focus on their core businesses.** Many SMOs are coming to the same conclusion.

A recent Harvard Business Review article entitled, "Why IT Doesn't Matter" by Nicholas Carr, (Vol. 81, No. 5, May 2003) supports this trend by suggesting that making further investments in IT is not in the best interest of most organizations.

Carr cites U.S. Department of Commerce's Bureau of Economic Analysis data showing IT capital expenditures of American companies grew from less than 5 percent in 1965, to nearly 50 percent in 2000. He also references a 2002 study by a consulting firm, called Alinean, that compared the IT expenditures and the financial results of 7,500 large U.S. companies, and found the **top performers spend less on their IT operations.**

Given the inverse relationship between IT spending and corporate performance, it is not surprising Gartner survey research has found approximately 65% of enterprises question the effectiveness of their IT investments in supporting their business goals and objectives. As a result, META Group, another research firm, estimates **70% of all organizations—large and small—are currently outsourcing all or part of their IT operations**, and nearly every organization will be doing so by 2006.

There is an additional advantage to strategic outsourcing in which a company contracts with a primary service provider to handle the bulk of their IT needs. **Using a single service provider rather than many to handle your IT needs can reduce the cost and complexity of contracting with multiple suppliers.** Strategic sourcing also improves the accountability of the service provider, because this approach eliminates the finger-pointing that often occurs between multiple suppliers.

However, many organizations have found that traditional outsourcing doesn't go far enough to truly solve their IT problems. Rather than simply offload their problems to an outsourcer, these organizations need to change the way they utilize technology.

***Subscribing to a utility computing service is a new form of IT outsourcing. The utility computing service can either augment or fully replace the in-house IT function. But, utility computing services go much further than traditional outsourcing to solve the fundamental issues SMOs face when it comes to getting the most out of IT.***

How does utility computing services differ from traditional outsourcing and managed services?

Unlike traditional outsourcing contracts which simply transfer the responsibility of managing IT operations from an enterprise to a service provider, ***utility computing services fundamentally change the way organizations consume computing power and utilize applications.*** These services replace or augment existing systems with more flexible ones that can deliver computing capabilities on an "as needed" basis.

The UCSP deals with the technology integration and distribution issues. The UCSP deals with the security and performance issues. And, the UCSP deals with the cost-justification and investment issues. And, when it is time to update or upgrade systems and software, UCSPs have the technology to migrate to the latest hardware and software electronically, making the process painless for SMOs.

***Utility computing services also permit users to pay as they go*** for the volume of service they need rather than a static computing capability. This enables SMOs to convert IT capital expenditures into operating expenses. As a result, ***SMOs can establish a more predictable month-to-month cost structure for its IT operations, without the day-to-day operational problems.***

Table 1 summarizes the differences between traditional outsourcing and utility computing services.

**Table 1: Traditional Outsourcing vs. Utility Computing Services**

<u>Outsourcing</u>	<u>Utility Computing Services</u>
Transfer of personnel responsibility	Transfer of 24/7 system management
Use existing computing systems	Enhance or upgrade current systems
Pay-per-Tech, hours, or T&M	Fixed or Usage-based pricing
Rely on skills of existing personnel	Utilize superior systems & specialists

## Major Corporations & SMOs Embrace Utility Computing Services

If you follow the business and IT industry press, you may have noticed a series of major utility computing agreements between IBM, Hewlett-Packard and EDS and a variety of brand-name companies, including American Express, J.P. Morgan and Proctor & Gamble over the past year.

These multi-billion dollar deals have not only grabbed headlines, they've also helped to validate the technical and business viability of the utility computing services model.

What has received less attention is the **growing receptivity among SMOs regarding utility computing services.**

As a result, some major IT outsourcers are setting their sights on selling utility computing services to SMOs. For instance, EDS announced in August 2003 a new utility computing service, called myCOE (“Consistent Office Environment”) aimed at SMOs. This new service is being delivered in conjunction with Microsoft’s Solution Accelerator for Business Desktop Deployment (BDD) to enable customers to perform Microsoft operating system upgrades and associated tasks in an automated fashion remotely. EDS and Microsoft claim this continuous software update capability alone will reduce SMO IT operating costs 20-30% a year.

Although this new offering validates the growing demand for utility computing services among SMOs, EDS and other major outsourcers are unlikely to successfully sell these services to SMOs. **The large IT outsourcers’ sales and service delivery models are too expensive to cost-effectively satisfy SMOs’ IT needs.**

Instead, **THINKstrategies believes a new breed of utility computing service providers who have built their service delivery models specifically to serve SMOs are more likely to be successful.** The following case study examines one of these UCSPs.

## Case Study: Rutherford Companies

The Rutherford Companies is one of the Top 100 largest independently-owned insurance brokerage, risk-management and business support services firms in the U.S. The company has twelve offices in six states, and clients nationwide.

**The company was attempting to expand its business, but found its in-house staff was pre-occupied reacting to IT problems** and they couldn’t dedicate the time necessary to properly plan and develop new applications and systems to support the company’s growth. **Rutherford decided it needed to outsource its IT operations to an external service provider so its staff could focus on more strategic IT initiatives.**

Rather than just turn its existing, problematic IT operations over to a traditional service company, **Rutherford decided it wanted to migrate its IT environment to a more stable and reliable platform**, and turned to **mindSHIFT**, a VA-based utility computing service provider with a comprehensive solution that met Rutherford’s needs.

**mindSHIFT migrated Rutherford to a Windows 2000 platform** with Active Directory Services and Microsoft Exchange 2000. More importantly, mindSHIFT assumed full responsibility for managing Rutherford’s LANs, servers, workstations and private Frame Relay network. mindSHIFT also provided 24x7 helpdesk support; nightly backup services; and comprehensive security management, including virus and spam filtering, and secure remote access for mobile workers and offices.

**Rutherford estimates that replacing the company’s IT operations with mindSHIFT’s utility computing services has improved corporate productivity by 20%.**

## Calculating the ROI of Utility Computing Services

As the Rutherford case study shows, ***the benefits of utility computing services are more than theoretical.*** They are very tangible and straightforward to calculate.

Here is a step-by-step approach to determine the potential cost-savings of utility computing services in your organization:

Step 1	<b><i>Tally of your current IT capital and operating expenses, including hardware, software, staff and support costs.</i></b> This inventory should include desktop, server, peripheral, network, storage, and security product costs; software and application license fees; maintenance agreements; and voice and data (including internet) communications service costs.
Step 2	<b><i>Identify the in-house staff costs</i></b> for those people formally assigned to manage your IT operations.
Step 3	<b><i>Calculate any outside IT contractor fees</i></b> you've incurred for additional technical support to select, implement or maintain your office technology.
Step 4	<b><i>Estimate the indirect costs of network or system downtime</i></b> including lost revenue due to customer and partner dissatisfaction, and lost employee productivity.

You will probably find that the ***total direct and indirect costs of IT in your organization are 10-20% of your total operating costs.*** You also need to be willing in some cases to replace a current employee with the expertise of a UCSP. It requires both a business assessment of what will help enhance your business and an honest assessment of your employees' skills.

Next, obtain fee schedules for a set of utility computing services from a cross-section of providers that match your organization's current and anticipated IT requirements. These ***services are typically priced on a per user or seat basis***, and for a monthly fee ranging from \$100-\$300. (Note that the range in pricing is a function of the complexity of your network, the number of your locations, the amount of your data, and your total number of employees needing support.)

***This exercise should show you how utility computing services can reduce the total cost of ownership (TCO) of your IT operations.*** Improved technology performance levels and utilization rates should push the economic benefits of utility computing even higher.

The next section of this white paper will give you some guidelines for selecting the right utility computing service provider.

## Selecting the Right UCSP

***Finding the right UCSP to match your IT computing needs means carefully examining their service portfolio, delivery capabilities and business viability.***

The service portfolio should focus on the technology issues of primary concern to your organization. These **services should extend across a lifecycle** that includes planning and design; deployment and integration; ongoing management and maintenance; and continuous updating of systems and software.

The UCSP should also have the following attributes:

- *Network connectivity* capabilities for electronic distribution of software updates.
- *Data security* policies to protect your proprietary information.
- *Service management* procedures to ensure rapid problem resolution.
- *Customer service* skills to provide proactive support.

***The UCSP must have a track record of success and solid client references.***

The UCSP must be able to **provide ongoing IT performance and activity reports**, help you measure the cost-savings generated by their services.

Finally, the UCSP **should also have strong financial backing** to fund the technology investments necessary to deliver its utility computing services.

## Conclusions and Recommendations

SMOs are frustrated trying to satisfy their business technology needs. As a consequence, SMOs are becoming increasingly interested in outsourcing their IT operations to a service provider that can generate greater performance and cost-savings from these assets.

***Utility computing services has become an effective method of alleviating the hassles and gaining the full business benefits from IT.*** As a result, a growing number of SMOs are adopting this approach to satisfy their IT requirements.

Table 2 lists some additional steps for successfully adopting a utility computing service solution to meet your business objectives.

**Table 2: Utility Computing Steps to Success**

<i>Step 1</i>	Identify the specific set of IT issues that need to be satisfied by utility computing services.
<i>Step 2</i>	Set realistic and measurable objectives for solving these issues.
<i>Step 3</i>	Use the selection criteria outlined in this white paper to pick a UCSP.
<i>Step 4</i>	Establish a service level agreement (SLA) that identifies specific, measurable IT and business metrics to evaluate the effectiveness of the UCSP.
<i>Step 5</i>	Conduct frequent performance reviews to determine if service level objectives are being met. If the objectives are not being met, determine if the objectives need to be modified or if the UCSP isn't capable of meeting your IT/business needs.

*In these challenging economic times, SMOs can no longer afford the added cost of inefficient IT operations. Utility computing services can eliminate this problem and improve the productivity and profitability of your business. Finding the right utility computing service provider will enable you to satisfy your technology requirements and meet your business objectives.*

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### **About THINKstrategies**

THINKstrategies is a strategic consulting services company formed specifically to address the unprecedented challenges facing IT managers, solutions providers, and investors today. The company's mission is to help our clients re-THINK their corporate strategies, and redirect their limited resources to achieve their business objectives. For more information regarding our unique services, visit [www.thinkstrategies.com](http://www.thinkstrategies.com).