The ASP Delivery Model for E-Learning:

Lower Total Cost of Ownership & Higher Return on Investment

Part of GeoLearning's *E-Learning Strategy Blueprint* Series

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E-Learning Strategy Blueprint

4600 Westown Parkway, Suite 301 • West Des Moines, Iowa 50266
Phone 800.970.9903 or 515.222.9903 • Fax 515.222.5920
info@geolearning.com • **www.geolearning.com**

What is an Application Service Provider?

An application service provider (ASP) provides software applications—and all the information technology infrastructure and support services necessary to deliver them—to customers on a subscription basis. ASPs typically host applications at a remote data center and deliver them to multiple users via the Internet.

The most popular business applications being hosted and delivered using the ASP model include accounting, e-mail, e-commerce, customer relationship management (CRM) and e-learning systems. These applications reside on the provider's servers and not yours. This leaves your organization'-s IT resources free to do the core business necessary for your organization. End-users access the hosted application via a browser and an Internet connection for an annual or monthly fee.

Compared to traditional client-server applications where the software and hardware are owned, operated and serviced by in-house resources, the ASP delivery model speeds implementation, minimizes the expenses and risks incurred across the application life cycle, and overcomes the chronic shortage of qualified technical personnel available in-house. Obtaining these applications from an outside supplier is a cost-effective solution to the demands of systems ownership: up-front capital expenses, implementation challenges, and a continuing need for maintenance, upgrades and customization.

In short, ASPs allow companies to save money, time and resources by outsourcing some or all of their information technology needs.

Applying the ASP Model to E-Learning

As businesses look to trim costs in an ever-tightening marketplace, more companies are turning to ASPs to leverage the latest technologies without incurring significant infrastructure, hardware or software costs. All aspects of an organization's e-learning solution can be delivered using the ASP model, including learning management systems (LMS), learning content management systems (LCMS), courseware content, authoring tools, and synchronous collaboration tools like webcasting and whiteboarding.

Many organizations, determined to capitalize on the cost-savings and productivity gains that can be realized from an e-learning initiative, have turned to the ASP model because it offers significant advantages, particularly in terms of cost savings. According to CompTIA, the Computing Technology Industry Association, businesses that use ASPs can reduce their information technology costs by 30 to 60 percent.

However, much of the cost savings inherent to e-learning can be quickly eroded by traditional client-server installations, including the large up-front capital investments for hardware and software, plus personnel to develop and service the application. In a cost-conscious business environment these may seem like weighty investments. In a recent *IT Training Magazine* article, e-learning expert Elliot Masie suggested that a tough economic climate could "make it more

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info@geolearning.com • **www.geolearning.com**

difficult for organizations to spend large sums on buying a learning system…[and] could result in a shift to an ASP (or hosted) model for LMSs in order to keep costs down. The need to align with business objectives will also become increasingly critical as executive teams are asking for cost reduction, direct savings and impact on business lines."

The popularity and growth of the ASP model for e-learning is primarily driven by three critical factors inherent in this delivery method: 1) speed to implementation and ability to impact business immediately; 2) direct cost and resource savings; and 3) outsourced system and technical expertise. Together these factors offer organizations lower *total cost of ownership* (TCO), and a significantly faster and higher rate of *return on investment* (ROI) when compared to traditional client-server installations.

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Benefits of Using an E-Learning ASP

E-Learning application service providers (also called Learning Service Providers or LSPs), deliver and manage e-learning applications and services from remote data centers to multiple users via the Internet. Obtaining your e-learning application from an outside supplier is a cost-effective solution to the demands of systems ownership, namely up-front capital expenses in facilities, hardware and software, implementation challenges, staffing for a complex computing infrastructure, and a continuing need for maintenance, upgrades and customization.

The e-learning ASP model offers client organizations with higher and faster return on investment (ROI) and reduced total cost of ownership (TCO) for several reasons:

- ***Speed to market.*** The e-learning ASP already has the equipment, applications, personnel and expertise ready to deploy an e-learning system. All end-users require is access to the Internet. As a result, the ASP delivery model enables your e-learning initiative to begin quickly, if not immediately. This is an important predictor of your initiative's ROI because the time to deploy the system determines how quickly you can benefit from it. The ASP also leverages the Internet for anytime, anywhere access. Whether they're located at headquarters, field offices, client sites, home, etc., all the users in your extended enterprise can have 24x7 access.

- ***Operational freedom.*** By outsourcing application management, the customer can focus critical resources on their core business function. ASPs give customers a viable alternative to procuring and implementing complex systems themselves. The ASP model allows your organization to concentrate on its core competencies and not divert key resources from revenue generating or mission critical tasks. There is no hardware or software to install, and no technical staff to hire or maintain. Implementations can be completed in days, unlike the months or years required by client-server e-learning systems. The result is significant savings in time, costs and resources.

- ***Improved performance.*** The e-learning ASP can apply its vast experience to implement best IT practices for superior levels of availability, security, backup, disaster recovery and help desk services. Internally installed client-server applications must share your IT team's time, attention and other resources with several other IT applications. Consequently, the reality is that your e-learning application will not always be your IT team's first and only responsibility. Conversely, e-learning applications are the only ones your ASP is maintaining, will be its first and only concern, and it specializes in this particular area.

- ***Financial flexibility.*** The ASP model reduces fixed costs and lowers overall expenditures for hardware, applications and systems management. Numerous studies have found the ASP delivery model to deliver higher return on investment and lower costs.

  Most notably is a March 2002 survey by the Information Technology Association of American that found 39% of ASP users received between 10% and 50% ROI, with 14%

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realizing ROI between 51% and 100%. Furthermore, the study suggested that much of the benefit of using an ASP goes beyond simple cost savings. Other important benefits included security, improved infrastructure, emergency back-up, better time to market, and access to new technology.

Another report by the IDC titled *The Financial Impact of ASPs* found that organizations using the ASP model generated an average 5-year ROI of 404%.

- ***Reduced risk.*** As many as 70% of internal IT projects are not completed on time, on budget, or at all. But ASPs are more predictable and reliable. With no capital expenditure on software, hardware or IT personnel, organizations can "test" a new technology with minimal impact to their existing environment and bottom line. With an ASP, you pay a single fee for running the entire system—software, hardware, networking, services—on an annual subscription basis without any financial surprises for employee turnover, equipment failures, or other unexpected operational problems.

  ASPs also protect client organizations against hardware and software *obsolescence*. It is the ASPs responsibility to maintain the most current computer equipment, and software upgrades are often made free of charge or at a fraction of their actual cost. In this way, ASPs provide their clients with access to the newest technology, and upgrades can be made to the system that are often automatic and transparent to the end-user.

Of Particular Interest to Small & Mid-Sized Organizations

Whether your company is large or small, an ASP arrangement saves time and money, and simplifies ongoing system reliability and support. Most industry experts agree the most appropriate market for ASPs is small and mid-sized organizations, but all agree there is also opportunity within both large enterprises and consumers.

With the help of an ASP, small and mid-sized organizations can deploy enterprise applications that without an ASP would involve massive investments in software, deployment time and IT personnel. These businesses can then benefit from the efficiencies of integrated, enterprise applications that were previously not cost-effective to develop and use.

According to Elliot Masie, "Smaller organizations need to develop learning solutions without the same level of enterprise support. That's their reality. This will often mean they will rely more on ASP and outsourced solutions."

With business operations now increasingly dependent on complex and rapidly changing information systems, IT managers are embracing the ASP approach to ensuring secure, business-critical applications. Large companies may decide to enlist an ASP to deploy critical, enterprise applications quickly and at an affordable cost, since the resource requirements for supporting these systems have grown exponentially.

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Measuring Total Cost of Ownership (TCO)

The Total Cost of Ownership (TCO) reflects the total expense involved in purchasing, deploying and maintaining an enterprise solution. As company executives are demanding predictability and accountability for the total cost of both hardware and application assets, TCO has become a popular decision making tool when choosing an e-learning solution. Although the ASP value proposition is much broader than TCO, the savings of an online enterprise application are ideal for senior management seeking ways to reduce costs in order to increase profit.

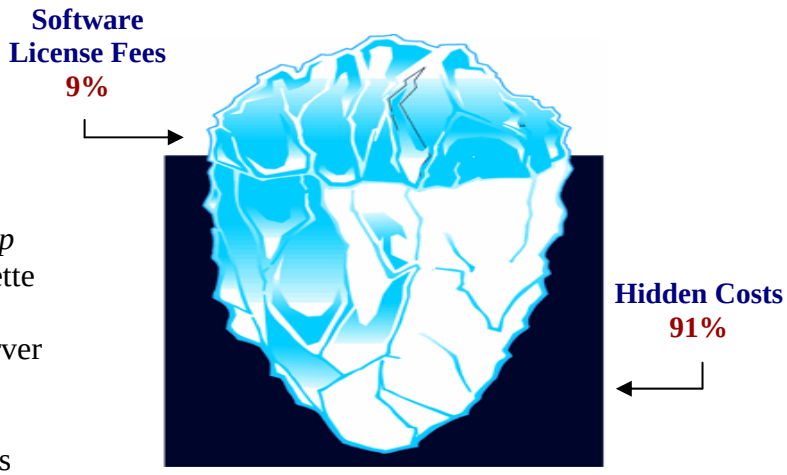
Breaking each line item of an e-learning solution into percentage of the total cost reveals an "iceberg effect" for the client-server solution. Over 90% of the costs associated with a client-server installation can be made up of hidden costs above and beyond the "visible" cost of the software license fee.

Cost Item	Client/Server	ASP
Software/License Fee	9%	80%
IT Personnel	14%	N/A
Hardware	26%	N/A
Implementation Costs (including customization & consulting)	43%	10%
Training Costs	1%	N/A
Technical Support & Service	7%	10%

Source: Yankee Group

Just the Tip of the Iceberg?

The Yankee Group's research illustrates how important it is to consider the total costs of implementing any application.



GeoLearning's *Total Cost of Ownership Calculator* (included on the same diskette as this white paper) is a useful tool for comparing TCO for ASP and client-server applications.

The example on the following page was constructed using the *Total Cost of Ownership Calculator* and reveals an important characteristic of the ASP vs. client-server comparison.

Even if the client-server *cost per user license fee* is lower, the resulting *total cost of ownership* for the ASP solution is typically much less, due in large part to the iceberg effect. In the example illustrated below, even a client-server solution with a license fee that is 60% lower than the ASP fee, the resulting total cost of ownership per employee is almost 350% greater.

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Cost Item	Client/Server	ASP
Software/License Fee	$20.00 (9%)	$50 (80%)
IT Personnel	$31.11 (14%)	N/A
Hardware	$57.78 (26%)	N/A
Implementation Costs (including customization & consulting)	$95.56 (43%)	$6.25 (10%)
Training Costs	$2.22 (1%)	N/A
Technical Support & Service	$15.56 (7%)	$6.25 (10%)
Total Cost of Ownership	**$222.23**	**$62.50**

Another way to state the iceberg phenomenon in this particular example is "the one-time cost of a client-server installation will cost as much as the annual license for an ASP solution over 3.5 years."

TCO Client Server / TCO ASP = # Years

222.23 /62.5 = 3.56

If the license fees are reversed or even equal, the differences in total cost of ownership become even more dramatic.

The hidden costs inherent in the client-server solution clearly make it an expensive proposition when compared to the ASP delivery model. And upon closer investigation, one can also identify two additional cost-related advantages of the ASP model:

1. The *useful life* of hardware and software can greatly increase the cost of the client-server solution. If the length of time it takes for the series of annual ASP payments to equal the one-time cost of a client-server installation (in the above example, 3.5 years), then there are additional costs that will be incurred for the server-client scenario. For example, if the useful life of servers is less than 3.5 years, then they will need to be replaced, adding additional hardware costs to the client-server solution. However, this is not an issue with the ASP solution because the ASP provider takes responsibility for the upkeep and maintenance of hardware and software. This illustrates how the ASP provider protects client organizations from hardware and software obsolescence.

2. Furthermore, the opportunity cost of money becomes extremely important over multi-year agreements. While an organization must typically pay all costs up front for a client-server solution, it can parse ASP subscription payments out over multiple years, and therefore pay for services as they are used and provide benefit.

Every organization's circumstances and cost structure will be somewhat different, and will require you to calculate TCO based on your specific situation. But the exponential effect of hidden costs—which we have referred to here as the iceberg effect—can result in significant cost differences that are extremely important when comparing alternative solutions.

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Moving Beyond TCO

A TCO calculation alone is an incomplete measurement when comparing various e-learning solutions, since it only reflects which solution is ultimately cheaper. Absent from the TCO calculations are any consideration to the value or increased revenues that result from an e-learning solution that can be rapidly implemented. When considering this and other intangible benefits, the ASP delivery model becomes a very attractive e-learning solution.

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Choosing an ASP

The process of choosing an ASP for your e-learning initiative involves three basic steps:

1. **Determine which applications you want an ASP to host.**

   These applications could be current e-learning applications you no longer wish to maintain in-house, new applications that will replace or augment your existing e-learning systems, or new applications being implemented for the first time in your organization.

   - ❑ Learning Management System
   - ❑ Learning Content Management System
   - ❑ Courseware Content:
     - ❑ Desktop Skills
     - ❑ Technical Skills
     - ❑ Soft Skills Professional Development
     - ❑ Management/Leadership
     - ❑ Safety/OSHA Compliance
     - ❑ Other: _____
   - ❑ Authoring Tools
   - ❑ Synchronous Collaboration Tools:
     - ❑ Webcasting
     - ❑ Whiteboarding
     - ❑ Polling
     - ❑ Text Chat/Instant Messaging
     - ❑ Other: _____
   - ❑ Help Desk/Technical Support
   - ❑ Other: _____

2. **Assess your organization's internal IT capabilities.**
   - What in-house resources and skills will your e-learning initiative have access to?
   - What internal systems might the ASP application need to interface or integrate with (databases, legacy systems, etc.)?

3. **Evaluate ASPs.**
   - Determine what qualities of the application and/or ASP are important to you. Issues to investigate include reliability, availability, security, management and customer service.
   - Develop specific criteria outlined in a request for proposal (RFP) or request for information (RFI) that can be sent to ASP e-learning providers.
   - Choose your ASP based on who has the strongest offering for what you need.

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Frequently Asked Questions

How reliable is the service from an ASP?

The goal for the ASP industry is to make the management of information technology as transparent and reliable as the management of sophisticated public telecommunications and data communications systems. Customers who turn to ASPs often find better application reliability and availability than they experienced from their internal IT organizations. The reason for this is that running information systems for other entities is the ASP's primary business. The ASP has the staff, expertise and state-of-the-art equipment to maintain and sustain the most reliable and up-to-date service.

How much does service cost from an ASP?

Costs and service levels vary widely according to the types of applications and services provided. Some studies have indicated that by leasing an application from an ASP, customers save between 33% and 53% over purchasing and managing the hardware and software for the application themselves.

Would an application leased through an ASP look any different to users than the same application if my company purchased it?

The application would look the same unless the application was specifically re-written for the hosted environment. If it wasn't re-written, the application will look and function exactly the same.

What about customizing the application?

Yes, application customization is possible when the application to be hosted over the Web is for a specific organization. Many times minor changes can be made just turning on/off certain features and functionality inherent in the application.

How should I select an ASP?

First, you need to determine what applications you want to rent. Next, you need to determine what qualities of the application and/or ASP are important to you. Issues to investigate include reliability, availability, security, management and customer service. Determine what features are most important to you and choose your ASP based on who has the strongest offering of what you need.

Does an ASP own its own data center?

It depends. Some ASPs own their own data centers, others outsource the physical management of the systems through a data center.

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Glossary

Application Service Provider (ASP): An ASP deploys, hosts and manages access to a packaged application to multiple parties from a centrally managed facility. The applications are delivered over networks on a subscription basis. This delivery model speeds implementation, minimizes the expenses and risks incurred across the application life cycle, and overcomes the chronic shortage of qualified technical personnel available in-house.

Availability: The portion of time that a system can be used for productive work, expressed as a percentage.

Backbone: A centralized high-speed network that interconnects smaller, independent networks.

Bandwidth: The number of bits of information that can move through a communications medium in a given amount of time; the capacity of a telecommunications circuit/network to carry voice, data and video information. Typically measured in Kbps and Mbps. Bandwidth from public networks is typically available to business and residential end-users in increments from 56Kbps to T-3.

Burst Information Rate: The Burst Information Rate (BIR) is the speed or rate of information that the customer may need over and above the CIR. A burst is typically a short duration transmission that can relieve momentary congestion in the LAN or provide additional throughput for interactive data applications.

Business-Critical Applications: The vital software needed to run a business, whether custom-written or commercially packaged, such as accounting/finance, ERP, manufacturing, human resources and sales databases.

Capacity: The ability for a network to provide sufficient transmitting capabilities among its available transmission media, and respond to customer demand for communications transport, especially at peak times.

Client/Device: Hardware that retrieves information from a server.

Clustering: Group of independent systems working together as a single system. Clustering technology allows groups of servers to access a single disk array containing applications and data.

Demarcation Line: The point at which the local operating company's responsibility for the local loop ends. Beyond the demarcation point (also known as the network interface), the customer is responsible for installing and maintaining all equipment and wiring.

DS-1 or T-1: A data communication circuit capable of transmitting data at 1.5Mbps. Currently in widespread use by medium and large businesses for video, voice and data applications.

DS-3 or T: A data communications circuit capable of transmitting data at 45Mbps. The equivalent data capacity of 28 T-1s. Currently used only by businesses/institutions and carriers for high-end applications.

Fat Client: A computer that includes an operating system, RAM, ROM, a powerful processor and a wide range of installed applications that can execute either on the desktop or on the server to which it is connected.

Hosted Outsourcing: Complete outsourcing of a company's information technology applications and associated hardware systems to an ASP.

Multi-User: The ability for multiple concurrent users to log on and run applications from a single server.

Outsourcing: The transfer of components or large segments of an organization's internal IT infrastructure, staff, processes or applications to an external resource such as an Application Service Provider.

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Packaged Software Application: A computer program developed for sale to consumers or businesses, generally designed to appeal to more than a single customer. While some tailoring of the program may be possible, it is not intended to be custom designed for each user or organization.

Performance: A major factor in determining the overall productivity of a system, performance is primarily tied to availability, throughput and response time.

Remote Access: The hookup of a remote computing device via communications lines such as ordinary phone lines or wide area networks to access distant network applications and information.

Scalability: The ability to expand the number of users or increase the capabilities of a computing solution users without making major changes to the systems or application software.

Server: The computer on a local area network that often acts as a data and application repository and that controls an application's access to workstations, printers and other parts of the network.

Server-Based Computing: A server-based approach to delivering business-critical applications to end-user devices, whereby an application's logic executes on the server and only the user interface is transmitted across a network to the client. Its benefits include single-point management, universal application access, bandwidth-independent performance, and improved security for business applications.

Single-Point Control: One of the benefits of the ASP model, single-point control helps reduce the total cost of application ownership by enabling widely used applications and data to be deployed, managed and supported at one location. Single-point control enables application installations, updates and additions to be made once, on the server, which are then instantly available to users anywhere.

Thin Client: A low-cost computing device that accesses applications and and/or data from a central server over a network. Categories of thin clients include Windows-Based Terminals (WBT, which comprise the largest segment), X-Terminals, and Network Computers (NC).

Total Cost of Ownership (TCO): Model that helps IT professionals understand and manage the budgeted (direct) and unbudgeted (indirect) costs incurred for acquiring, maintaining and using an application or a computing system. TCO normally includes training, upgrades, and administration as well as the purchase price. Lowering TCO through single-point control is a key benefit of server-based computing.

Transmission Control Protocol/Internet Protocol (TCP/IP): A suite of network protocols that allow computers with different architectures and operating system software to communicate with other computers on the Internet.

User Interface: The part of an application that the end user sees on the screen and works with to operate the application, such as menus, forms and “buttons.”

Virtual Private Network (VPN) - A secure, encrypted private Internet connection.

Web Hosting: Placing an organization’s Web-based application on a server that can be accessed via the Internet.

Wide Area Network: Local area networks linked together across a large geographic area.

Windows-Based Terminal: Thin clients with the lowest cost of ownership, as there are no local applications running on the device.

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