



The Software as a Service Delivery Model for E-Learning

Lower Total Cost of Ownership & Higher Return on Investment

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A. What is a Software as a Service Provider?

A Software as a Service (SaaS) provider offers software applications—and all the information technology infrastructure and support services necessary to deliver them—to customers on a subscription basis. SaaS organizations 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 SaaS 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 SaaS 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, SaaS allows companies to save money, time and resources by outsourcing some or all of their information technology needs.



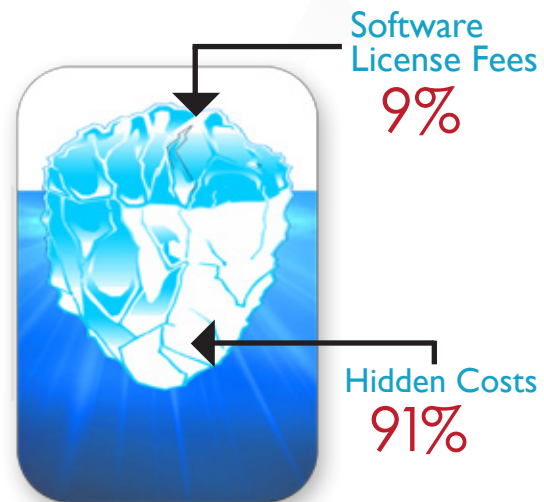
Measuring Total Cost of Ownership (TCO)

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 SaaS 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.

SkillSparks’s *Total Cost of Ownership Calculator* (included on the same website as this white paper) is a useful tool for comparing TCO for SaaS and client-server applications.

The example below was constructed using the Total Cost of Ownership Calculator and reveals an important characteristic of the SaaS vs. client-server comparison.



Even if the client-server cost per user license fee is lower, the resulting total cost of ownership for the SaaS 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 SaaS fee, the resulting total cost of ownership per employee is almost 350% greater.

Cost Item	Client/Server	SaaS
Software/License Fee	\$20.00 (9%)	\$50.00 (80%)
IT Personnel	\$31.11 (14%)	N/A
Hardware	57.78 (26%)	N/A
Implementation Costs	\$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 SaaS solution over 3.5 years.”

$$\text{TCO Client Server} / \text{TCO SaaS} = \# \text{Years}$$

$$222.23 / 62.5 = 3.56$$

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

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.

Software as a Service (SaaS): A company using a Software as a Service model 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.

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.