Software as a Service

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Software As A Service (SAAS) providers, previously known as Application Service Providers (ASPs) offer software hosted on hardware housed and maintained by the provider, saving the customer from having to install, manage, and maintain hardware and software locally. SAAS applications are sometimes called hosted software, on-demand software, or Web-based software.

The concept of SAAS started in the 1990s, but the term did not come into common usage until 2001 when the Software & Information Industry Association (www.siia.com) used it in a white paper.

A SAAS provider owns and operates the software application(s) that are needed to provide the service; owns, operates, and maintains the servers that support the software; provides access to the application(s) and information available to customers via a network, usually the Internet; and bills customers on a "per-use" basis or on a monthly/annual fee basis. The sole exception to ownership of the software application(s) by the provider is the use of open source software. Even then, some providers have added proprietary software that is not in the public domain.

The services include such tasks as loading records, back-up and recovery procedures, hardware maintenance, loading new software releases, and responding to customer inquiries. The ownership and management of data content remains with the customers.

Forms of SAAS

There are several forms of SAAS:

1. A consumer SAAS delivers an application to individuals, such as e-mail;
2. A functional SAAS delivers a single application to organizations, such as credit card payment processing services;
3. A vertical market SAAS delivers a solution package to a specific organization type, such as an integrated library system for libraries;
4. An enterprise SAAS delivers a broad spectrum of applications to organizations, such as payroll, accounts payable, accounts receivable, and tax
While many libraries use at least one functional SAAS, the focus of this TechNote is the vertical market SAAS providers that serve libraries.

Advantages and Disadvantages

The perceived advantages of using SAAS are:

1. Rapid start-up, typically weeks as against months for an in-house installation.
2. The capital costs of software and hardware, which are often subject to appropriation by a parent organization, are avoided; they are shifted to the operating budget, which usually is controlled by the library.
3. Ongoing costs are predictable and there is no need to maintain a reserve fund for hardware upgrades.
4. The five-year cost may be lower than for an in-house system when the number of users is small because the SAAS provider can realize economies of scale.
5. There is no need for in-house technical staff to maintain and manage the application(s) and system operators for routine activities.
6. It assures timely implementation of new releases and patches.
7. Availability is committed 24x7x365.
8. Depending on the terms of the contract, it assures a guaranteed level of service with regard to reliability, scalability, and security.

Some inherent disadvantages include:

1. The customer must accept the application as provided since SAAS providers do not customize the software for individual customers.
2. The customer has to rely on the SAAS provider to provide the application, thus limiting its control over the management of the application.
3. The SAAS provider may be unable to provide the level of service committed because of technical, labor, financial, or other problems.
4. Integration with the customer’s non-SAAS systems may be problematic.
5. The five-year cost may be higher than that for an in-house system.
6. It may be more difficult to migrate to another system from a SAAS that has small market share because the vendor of the new system has limited experience with migrations from the SAAS provider’s system.

Vendors like SAAS because it allows them to set up large-scale implementations of their software and provide it to individual customers at fairly low unit costs.

SAAS for Libraries

While OCLC (www.oclc.com) does not identify itself as a SAAS provider, it provides a service over a network using its software and hardware for a fee; therefore, it meets all of the elements of the common definition of SAAS. It offered circulation as a hosted service more than 30 years ago, a service that was not successful because of perceived
high cost and concern about network reliability and response times. However, its
cataloging support, interlibrary loan, and other services have all been highly successful for
as many as four decades. Some 62,000 libraries worldwide now use OCLC’s
cataloging, interlibrary loan, and database searching services. OCLC announced in April
of 2009 that it planned “to release Web-scale delivery and circulation, print and electronic
acquisition, and license management components to World Cat Local, continuing the
integration of library management services.” The first component, released in July of
2009, made it possible for libraries to use WorldCat.org as their user interface for all
OCLC services and a library’s resources, whether local or remote.

OCLC enjoys the benefits of very large scale. Many SAAS providers for libraries cluster
several computers to support a large number of concurrent users. Given the potential
need to accommodate as many as 5,000 transactions a second should it become a
worldwide provider of SAAS integrated library systems, OCLC can take advantage of
“cloud computing,” the harnessing of hundreds or thousands of computers accessible via
the Internet. This is the approach used by large airlines and other Fortune 1000
corporations.

Almost all vendors of integrated library systems offered a SAAS option at the end of
2009.

The percentage of libraries that have chosen to use SAAS for providing an integrated
library system is small, but it is growing. More than 2,000 libraries worldwide were using
SAAS for their integrated library system at the end of 2009. Several vendors signed
more SAAS customers than in-house system customers in that year. One hundred
percent of Auto- Graphics’ (www.auto-graphics.com) new customers in 2009 chose the
SAAS option for AgentVerso. More than 95 percent of all of its integrated library system
customers use SAAS. Auto- Graphics has offered union catalog and interlibrary loan
solutions for consortia for decades. Extending SAAS to include an integrated library
system was a logical next step.

SirsiDynix (www.sirsidynix.com) reported that it had a total of 450 SAAS customers as of
the third quarter of 2009.

Polaris (www.polarislibrary.com) reported that nearly half of its new customers since
2006 chose SAAS. In 2009, 25 of the 54 libraries moving to its Polaris integrated
library system chose SAAS.

The Library Corporation (www.tlcdelivers.com) has also been a major SAAS provider of
integrated library systems.

LibLime (www.liblime.com) offers a SAAS option for Koha open source integrated
library system software. All but two of 40 new accounts in 2009 chose the SAAS option.

Equinox Software (www.esilibrary.com) also offers a SAAS option for either Koha or
Evergreen open source integrated library system software.

In contrast to the foregoing integrated library system vendors, almost all new customers of
Innovative Interfaces (www.iii.com) chose an in-house system in 2009, as did the
customers of VTLS (www.vtls.com). Both do offer SAAS options, but the vast majority of
their customers are large enough to cost effectively implement in-house systems.

The vast majority of SAAS integrated library system customers are small libraries that need to support no more than 16 concurrent users, but a few mid-size public libraries have chosen the option since 2007. Vendors of integrated library systems have struggled for years to sell turnkey systems (i.e., systems that bundle hardware and software) at a profit to small libraries. But they can provide SAAS support at a profit not only to small libraries, but also to very small libraries that need to support five or fewer concurrent staff users.

SAAS for libraries is not limited to traditional library applications. For example, ebrary (www.ebrary.com) offers a SAAS solution that transforms a library’s PDF files into interactive hosted databases with technology for information discovery. Access is provided 24x7x365.

One of the reasons for the growth is the use of SAAS by libraries is that librarians are becoming more familiar with the SAAS model; another is that vendors are marketing their SAAS options more effectively than in the past. However, the most important reasons are that the cost of data communication over the Internet has dropped significantly because of broadband service and its reliability is no longer in question.

**Costs**

While it is not possible to provide costs for libraries of all sizes, an example may be useful, one based on a composite of several actual price quotations.

A SAAS provider that uses proprietary software would charge approximately $30,000 for service in year one for a library needing to support 16 staff concurrent users and 100,000 bibliographic records. There may be a lower first-year cost if a multi-year contract is negotiated, with the amount determined by the number of years committed. Data preparation and loading might add as much as $3,000, and on-site training for 12 days. $12,000 to $18,000. An annual software license, application management, and maintenance would be $7,000 to $13,000. The total five-year cost would be $73,000 to $100,000. The major variables would be training costs and the result of negotiation.

The five-year cost is not necessary less when a SAAS that uses open source software is selected. While there is no software cost, the set-up, data migration, and training costs may be higher.

Nor is the five-year cost of SAAS always less than that of an in-house system. A library requiring support for 16 concurrent users and 100,000 bibliographic records will often realize a lower five-year cost with SAAS, especially if one accurately calculates the cost of technical staff; but one that requires support for more than 30 concurrent users usually will not. A library that requires support for five or fewer concurrent staff users almost always will realize a lower five-year cost with SAAS.

Clearly, a library should solicit multiple proposals and make sure that the proposals are comparable over five years. It is also a good idea to compare against the five-year cost...
of an in-house system.

**Other Evaluation Criteria**

While cost is a major criterion for libraries considering a SAAS solution, it should not be the only one. Among the questions to which written, binding responses should be sought are:

*Breadth of functionality*

Is all of the functionality required by the library available? Some integrated library system offerings are either limited to cataloging, circulation and patron access catalog modules, or offer limited acquisitions, serials control, and interlibrary loan functionality. A library should not make its choice based on the modules it wishes to implement initially, but on all that may be needed in the next five years.

*Availability hours*

Are the patron access catalog, federated searching, and link resolution available 24x7x365 and all other modules all of the hours the library is open, and is likely to be open in future years?

*Integration with other applications*

Is there integration or a seamless interface among the applications used by the library, both those in-house and supplied by the SAAS provider?

*Viability of the vendor*

Is the vendor profitable, and does it have a library customer base large enough that it can continue in the library market even with a decline in “new name” accounts, sales to libraries not previously customers.

*Performance guarantees and remedies*

Does the vendor provide minimum up-time and response time guarantees and contractual remedies should the level of service it commits not be achieved.

*Data Security*

Does the vendor regularly back-up data and maintain an off-site copy of the data.

*Price protection*

Are ongoing costs fixed or capped at a maximum percentage of increase of no more than five percent per year for the length of the contract period.