by Jill Barson Gilbert

Software as a Service—
A New Generation of Online Software Delivery

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No matter where you are or what time of day it is, when armed with the right equipment you can quickly and easily check e-mail or find directions online using Web sites such as MapQuest, Yahoo!, and Google. Several commercial environment, health, and safety (EH&S) software applications now allow you the same type of "anytime, anywhere" access to manage your global business. All you need is a computer, a Web browser, and an Internet connection.

Online software delivery is a simple concept. The first generation of online software delivery, the Application Service Provider (ASP) model, failed to meet reliability and quality standards. Companies were cautious to adopt, not wanting to send sensitive information across the Internet. As a result, some vendors dropped ASP in favor of a "hosted" software model (see "Should You Lease or Own?" *IT Insight*, June 2001, p. 12).

The second generation of online software delivery, Software as a Service (SaaS), is a growing concept. Information technology (IT) research company Gartner Inc. (www.gartner.com) expects that by 2008, 50% of the U.S. software market will be purchased as a service. The SaaS market accounted for US$137 billion in the United States in 2005 (see Software as a Service, *CIO Insight Fact Sheet*, 2007; www.cioinsight.com). Your organization may already use SaaS for online meetings and collaboration, sales management, or payroll processing.

Ten years ago, online software delivery was almost unheard of in Fortune 500 companies. These companies had large IT departments and wanted the software installed in house where they could closely monitor it. Information security was the main concern. Four years ago, while working with a client on an EH&S software implementation, I asked the chief information officer if ASP software delivery was an option. He was skeptical, preferring the security of an in-house installation. However, 18 months later, when decision time came, online delivery had started to make good business sense. The company could avoid upfront capital costs for server hardware and software license fees, and their limited IT staff would not be stretched beyond their limits.

WHY THE GROWTH IN SAAS?

Market discontent and IT advances make SaaS an attractive option. Customers often find traditional software delivery methods lacking, frustrated with onsite (i.e., internal, inside-the-firewall) installations because of long implementation cycles, expensive upgrades, and the drain on internal resources. With online software delivery, customers feel that they have more leverage over the vendor relationship because they can change vendors more easily than with onsite software deployment. Meanwhile, new software design and delivery methods allow providers to cost-effectively share one application among hundreds of customers.

The majority of the market, however, wants proven software and solid references before they will buy. Early market leaders (e.g., salesforce.com, WebEx, and ADP) have shown that SaaS is a viable option. Investors have taken note—SaaS vendors outperformed traditional software vendors by 13% from 2002 through 2006 (McKinsey and Co., Delivering Software as a Service, May 2007; www.mckinsey.com).

ONLINE VS. ONSITE

The most commonly voiced risks of using online versus onsite software include

- **Reliability**—What if the software is not available?
- **Security**—Will the software maintain the privacy of information required by regulations?
- **Architecture**—Does the company using the software have the IT architecture to allow them to gain the greatest business benefits?

The latest SaaS offerings have addressed many of these concerns (see "Benefits of SaaS" opposite).

SAAS FOR EH&S

To get the most from your information, you need data integration, information delivery, and analysis tools. SaaS software should be simple, complete, use proven architecture, and should be the standard—that is, best in class. So where does this leave EH&S professionals?

The EH&S software market is fragmented, leading to composite solutions (AMR Research, February 2007; www.amrresearch.com). Some EH&S software companies have been acquired by others, and the market is ripe for further consolidation. This means that you will find it difficult to identify a single solution that meets all of your EH&S needs—whether installed online or onsite—and you should not expect it to! Expect some integration—hence the need for a good IT infrastructure that allows

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Benefits of SaaS

- **DOWNLOAD** more standardized, representing the best practices of many different user companies, in a variety of industries—customers influence future functionality.
- **DOWNLOAD** design and delivery methods allow providers to cost-effectively share one application among hundreds of customers.
- **DOWNLOAD** very configurable, allowing customers to view information in a format unique to their company.
- **DOWNLOAD** delivered using a Web browser, with no need for "client" software other than an Internet browser and typical office applications to open documents and spreadsheets.
- **DOWNLOAD** more standardized approach to implementation of the software application, which results in shorter implementation times.
- **DOWNLOAD** more frequent, less painful upgrades, performed by the software vendor.
- **DOWNLOAD** lower total cost of ownership and lower upfront fees than if purchasing traditional software licenses plus annual maintenance and support.
- **DOWNLOAD** uses sustainable IT and customers do not need to update or own server and license management software.
- **DOWNLOAD** higher level of service.

information sharing among software applications. If you require extensive integration, perhaps SaaS is not right for you.

In the past few years, long-time EH&S software vendors have upgraded their software to true Web-based applications. Vendors that are newer to the market may have a technical advantage, having designed a complete solution for the Web from the ground up. Today's offerings focus more on business processes or solutions than on specific regulatory programs. This makes the software more flexible, allowing it to meet customer needs well beyond EH&S. For example, you can use "audit" features for any type of audit or inspection where you can define a list of questions—quality, human resources, or full-blown EH&S audits. Also, "task management" and "task calendar" features work equally well for tracking EH&S audit action items, environmental permit expirations, and inspections as they do for sales, maintenance, and accounting tasks.

If you are in the market for EH&S software, take another look at SaaS. You may be pleasantly surprised. **em**

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