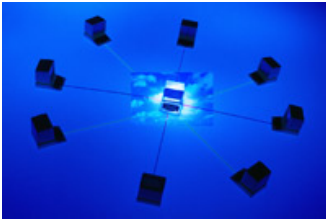


SaaS: New Efficiencies for Businesses; New Role for the IT Pro



Software as a Service is reshaping corporate computing and eventually will become the means by which many small and medium-sized companies acquire and use most of their applications, say Information Systems Professors [Julie Smith David](#) and [Michael Lee](#). And in time, it is likely that even bigger firms will get much of their software via online subscriptions. The two scholars authored a report for the Society of Information Management's Advanced Practices Council recently. In all likelihood, Smith David says, even multinationals will consider using Software as a Service -- abbreviated as SaaS -- for everything except the key functions that give them their competitive advantage.

"If you're eBay, you won't want to outsource your infrastructure for online auctions," she says. "But everything else, you might consider it. It's hard for me to believe that processing payroll is creating a competitive advantage for an eBay."

Software as a Service is delivered via the Internet, and thus is accessed using web browsers. The software and data does not reside on the customer's computers but on the vendor's servers. Customers pay regular subscription fees for access, and vendors maintain and continuously improve their programs.

One of the pioneers in this area was Salesforce.com, which began as a provider of sales force automation software. Salesforce.com has evolved the sales and marketing applications it provides, and has also morphed into an open platform for the worldwide developer community to enhance their offerings with a variety of sales and marketing -- and other functional area -- applications. Think of it as analogous to Facebook. Facebook started as a site where friends could interact. But it has become a social-networking platform by opening its architecture to software developers, inviting them to write programs, like the game Farmville, that people can use on the site. These applications are often what make Facebook "sticky" and add value for their customers; the same can be said about the most popular externally-developed applications on the enterprise platforms.

From gatekeeper to facilitator

In many companies, experimentation with Software as a Service is happening today -- at times without the participation of the IT department, Smith David says. The cost of subscriptions is low enough that employees can make purchases without the approval of IT managers, and they can begin to use applications without hardware upgrades or software integration. They need only an internet-connected PC and a browser.

"I've probably presented to IT executives from about 70 of the Fortune 500 companies about SaaS, and no one has said, 'We don't have any Software as a Service,'" Smith David says. "They're testing right now, and a lot of those tests are being driven by people in functional departments like sales."

The challenge for IT professionals, then, is relinquishing their traditional role as software gatekeepers, and assuming a new role as facilitators and enablers, conductors who modify IT strategies to embrace Software as a Service, Smith David and Lee say. A forward-looking manager should steer people to the best Software as a Service offerings and develop a plan for how to weave those into the rest of the company's IT infrastructure.

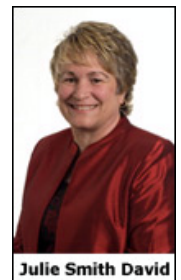
"I recently met with 25 IT executives from a large pharma company," Smith David says. "And the CIO said, 'We're no longer going to be known just as the department that says "no" because people are now implementing applications that were historically within our purview without asking us.'"

Besides convenience, an advantage of Software as a Service is its impact on corporate cash flow. In the traditional software environment, the customer makes hefty upfront payments to license an application and purchase hardware for use internally. A software subscriber, in contrast, makes much smaller, routine payments -- typically monthly. Often, if the subscriber doesn't need the more sophisticated capabilities of an application, he doesn't have to pay for them. Because users access the software via browsers, the arrangement has also spared customers deployment costs.

"The monthly payments are predictable and reasonable (benefits of the SaaS vendor's economies of scale), SaaS offers the latest functionality, and, to some extent, subscribers pay only for what they use," the two scholars say in their report.

But is it secure?

That said, three main objections have arisen to software as a service: that it can't deliver the security, availability and performance



of traditional software.

"I'm not sure that any of those are significant concerns," Lee says.



He says that Software as a Service is no more vulnerable to hacking and leaks than current setups. "People have an unfounded notion about how much security there really is in big organizations. We send all sorts of sensitive stuff via email -- how secure is that? How difficult is it for a disgruntled employee to hack into a system? We make available our personal profiles on Facebook. Our accountants probably keep our personal and financial information in a filing cabinet that is susceptible to break-in and theft."

In theory, a Software as a Service vendor can invest more money in security than many of its customers can. "It costs about \$125,000 a year for a staff security expert," Smith David points out. "How many small businesses can afford that? Software as a Service companies can hire multiple security experts. And even though large companies have economies of scale and in-house security experts, can they get better security from SaaS? I don't know. But it's very likely that small and mid-size companies can."

Plus, contracts and confidentiality agreements bind Software as a Service suppliers, just as they bind traditional vendors. If companies promise a level of security, they either deliver it or risk being sued. What's more, third parties can certify that vendors are providing what they promise. For example, SaaS clients are concerned with the quality of processes performed by their SaaS providers -- and after Sarbanes-Oxley, many firms are required to evaluate their key suppliers' systems and processes. To efficiently respond to these concerns, SaaS companies can contract with public accounting firms to perform "SAS 70 audits" which allow them to signal to all of their clients that they are compliant with Sarbanes-Oxley requirements.

Worries about availability and performance likewise seem overstated, Lee says. Both basically boil down to one question: will subscription software be able to be available to do what I want when I want? Here again, Lee sees little real downside when compared with current arrangements. Many of the availability and performance requirements and expectations are negotiated and defined in a service level agreement.

Installing software in-house gives people a sense of security, but that may be a mirage, he says. Folks assume that the traditional software will be reliable because IT staffers can tend to it. But corporate servers crash, and big installations and upgrades can cause interruptions. If anything, Software as a Service vendors are better situated to head off mishaps than their customers are, he says. "I see Software as a Service suppliers as similar to the power company -- they can afford to put backup generators in place in case the real thing goes down. They have dedicated industrial scale to provide this support."

Performance should operate much the same way. A Software as a Service company should, thanks to its dedicated scale and expertise, be able to offer some of the best features in its market. And performance shortfalls, compared with traditional software, should diminish as vendors mature and competition increases. All in all, availability and performance is monitored, reported, and supported by backup and disaster recovery plans that are governed by service level agreements.

SaaS from a strategic perspective

If there's a looming worry with Software as a Service, it's integration, Smith David says. For the moment, many corporate departments are subscribing to services that meet their narrow needs without appreciating the long-term implications of these independent decisions. Eventually, as more groups use more vendors, IT departments will have to figure out ways to ensure seamless integration.

"The functional groups, like sales, that are making the choices today are ignoring the integration," she says. "They're focused on solving their short-term problems." Eventually, companies will have to integrate, and IT professionals will find that job easier if they anticipate it, rather than waiting and having it foist upon them, she says.

Emerging Software as a Service platforms will help in this regard. If a developer writes a program for, say, the Salesforce.com or NetSuite platform, then that program will dovetail with all the other offerings on that platform, Smith David points out. Thus, if a company ends up using two applications from a particular vendor, it shouldn't see integration problems. In addition, developers are creating "bridges that allow you to connect the different platforms," she says.

"If organizations take a strategic approach to SaaS, they're going to be better off -- they're going to be able to add in the best functionality as it becomes available. So I'd tell IT professionals to do an inventory of your current computing environment and decide how SaaS fits in. Then look for opportunities to pilot the model in functional areas that make sense with low risk -- identify applications that would be too costly to implement in-house, but which are great trials for the SaaS model."

Smith David is so convinced of the promise of Software as a Service that she's already made it part of her class on managing enterprise systems. A key element of the class is teaching the students how to determine which software applications a company should be using. "One of the questions I'm encouraging them to ask is, 'Should you do this in-house or could you be doing it through SaaS?'"

To help students understand how IT professionals make these decisions, Smith David has invited in speakers from Salesforce.com and RightNow Technologies, while Lee has had NetSuite speak in his classes. The experts have taught students about everything from the technical characteristics of leading SaaS software to best practices in software selection. Having industry leaders on campus has given faculty and students alike the opportunity to explore this emerging IT issue and prepare for the strategic opportunities it may provide.

Bottom Line:

- Software as a Service is delivered via the Internet, so the software and data does not reside on the customer's computers but on the vendor's servers.
- Customers pay regular subscription fees for access, and vendors maintain and continuously improve their programs.
- The challenge for IT professionals is relinquishing their traditional role as software gatekeepers, and assuming a new role as facilitators and enablers who modify IT strategies that embrace Software as a Service, says Information Systems Professor Julie Smith David.
- If the IT professionals stay on top of their company's SaaS purchases they can prevent potentially messy integration problems down the road, David says.
- Objections to SaaS include security, availability and performance concerns.
- Information Systems Professor Michael Lee says that in theory, a Software as a Service vendor can invest more money in security than many of its customers can.
- Availability and performance requirements and expectations are negotiated and defined in a service level agreement, Lee says.