

## Going Outside the Walls: Companies Debate the Merits of Software-as-a-Service

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**Can you trust your software vendor with critical data and applications that are sitting in a server at a remote location? The model offers numerous advantages—and some caveats as well.**



A dozen years ago, Gregory Bostick wouldn't have considered buying business software that was installed and maintained off-site. "I would have said, if the internet gets up to the speed of a mainframe, it would be a great idea," says the vice president of transportation with Pinnacle Foods Group. Six or seven years ago, when that goal was essentially reached, Bostick still had concerns about the level of vendor support for hosted software. Today, however, it's a whole new ballgame.

Pinnacle, producer of such big-name consumer brands as Duncan Hines, Hungry Man, Aunt Jemima and Log Cabin syrup, relies on a transportation management system from LeanLogistics Inc. The application is delivered under what has come to be known as the Software-as-a-Service (SaaS) model. As such, it resides within the vendor's own servers and is relayed to Pinnacle's transportation managers via the internet.

With the speed problem solved, Bostick was happy to work with a technology that involved minimal start-up costs. He recalls the heavy outlay of capital and time that was needed to implement on-site supply chain planning and execution software from other vendors. The LeanLogistics TMS, by contrast, was already up and running on a remote server when Pinnacle acquired it.

The question of service has been laid to rest as well, at least in Bostick's view. In the past, when all applications resided on its mainframe, Pinnacle relied on an extensive in-house IT staff for software support. It was kept busy with constant updates and the challenge of integrating many disparate systems. "There was always something going wrong," Bostick recalls. "Warehousing staff was pulling its hair out."

Not so with the hosted TMS. "We've had just one major outage in five years," he says. "We were down just overnight." Updates to the software are introduced on a regular basis, with new versions drawing heavily on input from customers who attend an annual users' symposium staged by LeanLogistics.

Much of Bostick's confidence in the SaaS model stems from his trust in the vendor, with whom he had worked at his previous job. Pinnacle retains coding rights to the software, and could switch with relative ease to another TMS provider in the event that LeanLogistics goes out of business or merges into another company. Bostick admits to some concern when the vendor was acquired by pallet supplier CHEP earlier this year, although he says those fears have been allayed in the subsequent months.

Having just one version of the TMS software "allows us to focus on delivering the most current version of leading-edge technology in the marketplace," says Chris Timmer, vice president of sales and marketing with Holland, Mich.-based LeanLogistics. "[Clients] don't have to go through a code change. They leave on Friday, come in on Monday and the new code is deployed. They never know the difference unless there's a process change."

Currently LeanLogistics supports about 50 shippers on a common platform. Timmer says the vendor operates under strict service-level agreements tied to key performance indicators, with an uptime record of 99.8 to 99.9 percent. "Our standards are typically higher than most of our customers'," he says.

The same goes for the company's policy on security, he says. Potential buyers of SaaS applications might well ask about the safety of their data, given that they're sharing the program with multiple users on the same server. But Timmer says LeanLogistics takes great pains to ensure the integrity of all information that resides in the system.

### **A Flurry of Activity**

The topic of SaaS hasn't lacked for attention in recent years. Nearly all of the major supply chain vendors have either adapted at least some of their applications to that delivery model, or announced plans to do so. But the flurry of publicity has also led to some confusion over terms. Steve Banker, service director for supply chain management with Boston, Mass.-based ARC Advisory Group, lays it all out in a report from earlier this year.

Banker distinguishes the term "hosted" from that of SaaS. The first, he says, describes a traditional IT outsourcing arrangement under which each software buyer gets its own instance of the application, which is managed by a third party. SaaS and the related term "on demand" imply the use of a "multi-tenant" model, where multiple companies share one instance of the application and its infrastructure. Because most legacy systems were not designed for that setup, "SaaS applications have to be specially architected to operate in this model," Banker says.

For that reason, SaaS versions of many applications have been slow in coming to market. So far, the model has gained the most traction in customer relationship management (CRM), human capital management (HCM) and other kinds of "front-office" software, says Rob Bois, research director with Boston-based AMR Research Inc. That is partly due to the success of Salesforce.com, the CRM application launched in 1999 in a pure SaaS mode.

Such tools are attractive to line-of-business managers who don't want to deal with their companies' IT departments. Sales and marketing organizations often have the power and money to fund their own projects without tapping the capital budget, Bois says. They don't have to lobby for the support of IT, which juggles multiple priorities and tends to engage in prolonged debates over every dollar spent.

Bois hasn't seen a lot of SaaS activity in the areas of advanced planning and scheduling (APS) and manufacturing, both of which involve high levels of integration and customization. They also tend to be more closely tied to IT, which generally exerts more power over functions that are traditionally viewed as cost centers.

That said, the high-technology sector has shown more interest in SaaS than other industries, according to Bois. Such companies "are more apt to adopt emerging new technologies," he says. As the SaaS model takes hold, companies in other sectors should begin to see its benefits in areas that impact the supply chain.

Banker believes that SaaS is best suited to "business processes that are inherently network centric—i.e., processes that involve extensive communication and collaboration between many different trading partners, such as suppliers, customers, carriers, logistics service providers and customs agencies. Transportation fits this requirement perfectly; so does global trade management."

Liz Herbert, senior analyst with Cambridge, Mass.-based Forrester Research, adds that SaaS tends to work best with applications that are standardized from one company to another, such as HCM. SaaS "still hasn't had heavy uptake in areas that require heavier customization and integration.... With SaaS you can't go in and modify the underlying code." The more traditional hosted model allows for such change.

### **Popularity Is Rising**

Nevertheless, Herbert says, interest in SaaS is growing. A Forrester survey in late 2007 found that 16 percent of respondents were currently employing the model in some part of their companies. That compares with 12 percent in the previous year. Much of that activity seems to be taking place under the radar of financial overseers. "Some companies have even bypassed the chief financial officer if the pay-as-you-go fee is low on a monthly basis," she says.

The rising popularity of SaaS has also triggered skepticism among potential buyers, particularly with respect to the price. Vendors push the low cost of implementation and start-up, but companies are asking whether the ongoing subscription charges for SaaS—and, in some cases, additional transaction fees—make that choice more expensive than on-premises software in the long run.

The issue is especially relevant for small to medium-sized businesses, who in theory are the biggest potential beneficiaries of SaaS. "To ensure that SMB SaaS adoption glides smoothly into the early majority phase, marketers will need to address skeptics' concerns head-on," says Forrester analyst Michael Speyer in a recent report. "Marketers will need to clearly demonstrate the TCO [total cost of ownership] advantages of SaaS, ensure that their products have well-defined data integration and conversion procedures, show price transparency, and have well-articulated security and data-protection stories."

Bob Salvucci, president and chief executive officer of Philadelphia-based MCA Solutions, says his company has geared its on-demand applications for service parts planning to small and mid-sized accounts. With the hosted offering, MCA makes sure to specify the precise price, time frame and services that will be involved in the deal. "We tried to get some best practices, and build a cookbook for implementation so the costs were packaged," he says. If the pre-configured, standardized option isn't sufficient to meet the customer's needs, then MCA can offer a more traditional software license.

MCA's software is hosted, but it isn't offered under a formal SaaS model. While the product is delivered under a flat monthly fee, it does not exist in a multi-tenant environment. Even if users share space on a server, each gets its own instance of the software. What's more, MCA doesn't itself host the application. That task is performed by an application service provider, Terremark Worldwide Inc.

Salvucci doesn't believe that MCA's bigger customers will shift to a full on-demand model for running the vendor's software. "A lot has to do with the security around the data," he says. Big companies also want to ensure that the application integrates tightly with their enterprise resource planning software and other supply chain tools such as warehouse management systems.

The jury is still out as to whether WMS is suitable for the SaaS approach, but Oakland, Calif.-based SmartTurn is betting that it is. Richard Yim, vice president of product and marketing, says his company began targeting smaller businesses with less-sophisticated warehouse operations. In the last six months, however, "we have gotten a lot of interest from bigger companies with small warehouses all over the place."

Yim refers to these numerous locations as "dark spots in the supply chain." Instead of asking an "enterprise" vendor such as SAP AG to craft a suitable composite application on its own platform, companies can make use of "best-of-breed" software via the SaaS delivery model, Yim says.

SaaS can be a good fit for warehouses that are running in-house legacy systems and lack up-to-date ERP software, he says. The option can provide them with real-time visibility into their inventories for the first time, with minimal start-up concerns.

At the same time, Yim acknowledges the difficulty of building a SaaS model for the supply chain, with its need for security, shared data and integration of complex systems and hardware. It can be especially problematic for large warehouses that are highly customized for particular companies or industries, although that description applies to only a small portion of the total facilities in operation. "Most of our customers don't need that tight integration," he says.

### **Blazing the Trail**

Brian Anderson, vice president of marketing with software vendor Axeda in Foxboro, Mass., says Salesforce.com has helped to blaze the trail of acceptance for SaaS. Companies that were reluctant to have their data reside elsewhere are now becoming more comfortable with the idea. As a result, "80 to 90 percent of our [customer] pipeline is interested in our on-demand solution," he says. They are especially drawn to the rapid implementation period that is typical of SaaS.

Axeda sells software that helps its customers to provide remote services, such as General Motors' OnStar vehicle tracking system. The vendor's applications enable two-way data communications and proactive monitoring of potential problems. That type of software falls well within the customer-service arena that appears to be SaaS's strong suit. The technology makes less sense for applications such as desktop software and computer-assisted design, Anderson says.

But even ERP, which is nearly always installed on-site, is a long-term candidate for SaaS, he believes. "It's the same idea – you should be able to tap into the computing power for your applications from the network, without having to have it be local. There's no reason why it can't be applied to ERP like anything else."

Management Dynamics, an East Rutherford, N.J.-based provider of software for global trade management, offers all of its applications and information services via SaaS subscriptions. They include transportation management, supply chain visibility, trade content data and trade compliance aids. Certain larger customers want the compliance and trade management tools installed behind their own firewalls, notes Nathan Pieri, senior vice president of marketing and product management, but the other applications are available only in SaaS versions.

"In general, the progress of SaaS has just exploded," says Pieri. Even large companies that are accustomed to the license model are showing interest in going the SaaS route. "I've been getting feedback from a lot of executive sponsors who like subscription because it represents a flat expense line."

Transaction fees can drive up the cost of SaaS, but Management Dynamics offers the option of using the software on that basis, or paying just one price regardless of activity volume.

"Whatever works for the customer," Pieri says.

Concerns about the SaaS vendor going out of business can be addressed in the contracting stage. Companies can define exactly how they will gain access to their data and the software. In any case, with most major software vendors moving to SaaS delivery models, "even if a large company were to acquire a smaller SaaS vendor, I don't think it would rock the boat that much," Pieri says.

"SaaS is a redefinition of the software industry," he adds. "It's the way people are going to do it."

### **Where It's Going**

Curt Finch, CEO of Austin-based Journyx Inc., cites analysts' estimates that 30 percent of new software will be delivered via the SaaS model by 2010. "For many companies large and small, SaaS is the best way to roll out new technology," he says.

Journyx is not a vendor of supply chain software; it sells tools for tracking employee time for purposes of payroll billing, project management and project execution. Dashboards within the application help users to see the status of ongoing projects, and whether they are on schedule. Such a task lends itself well to SaaS, Finch says, except in the case of large customers in highly security-conscious industries, such as pharmaceuticals. Even there, he believes such concerns are more a question of perception than reality. "It's not for me to tell them when it's appropriate to use SaaS or not," he says. "I don't feel security is a big problem.... We have more of an incentive to avoid leaks than a bank."

SaaS is especially suitable for applications that a company might want to try out as "experiments," he says. Software acquired for a monthly charge can be disconnected with relative ease if the buyer decides that it isn't delivering a competitive advantage. If the tool is a success, on the other hand, the company could choose to bring it in-house.

As for the total cost of running an SaaS application, "I don't believe it adds up to more in the end," Finch says.

Not everyone is bullish on the idea of SaaS. Wayne Slossberg, vice president of QuestaWeb Inc. in Westfield, N.J., has serious concerns about the trend. His company sells software for managing global trade and logistics. Recently it began offering a SaaS version. "To date," he says, "I've had not one of our customers who really take that as an option."

Companies thinking about SaaS continue to have questions about data integrity and their ability to integrate multiple applications to back-office systems, Slossberg says. Integration costs are actually lower when the software is owned, he claims, "because you're not doing other applications. When the hosted solution goes away, so does all the integration." Moreover, he believes that the ongoing cost of renting software can erase the savings from cheaper implementation and start-up.

Slossberg rejects the argument that SaaS providers have a greater incentive to maintain reliable and high-

quality service. "SaaS marketers would have subscribers believe that being in the subscription business and providing services to thousands of customers somehow requires them to outperform software vendors or offer more secure services," he writes in a recent article. "This is simply not true. [Traditional] software vendors' survival is just as intimately intertwined with performance as SaaS sellers'."

As for the security issue, Slossberg asks, "what could be safer than placing software on a server behind a firm's own firewall?"

Despite those reservations, vendors will continue to beef up their SaaS offerings. Timmer of LeanLogistics says the trend is toward entire platforms being offered as a hosted service. The technology can provide users with information derived from extended networks, allowing them to make more informed decisions about transportation spending, he adds.

An earlier iteration of SaaS, the application service provider model, hasn't panned out as hoped. But AMR's Bois believes the same thing won't happen this time. "We still have some questions about long-term profitability," he says, "but everything we're seeing in our research says that this is what buyers want. I do think it's a model that's here to stay."

Curt Finch, CEO of Journyx, offers a number of questions that companies should ask of vendors with Software-as-a-Service (SaaS) delivery models:

- How well have you integrated your SaaS operations into your core business?
  - Where is the computer that will host my application?
- Is your data center staffed around the clock, seven days a week? What staff is on-site? What physical security measures are in effect?
- Do you have a disaster recovery plan if the data center becomes unavailable? Does the center have backup power measures, such as batteries and generators? What cooling and fire suppression systems are in place?
  - From how many internet service providers do you purchase connectivity?
  - Are servers dedicated to each customer, or do multiple customers share a single server?
- What data do you back up, and how often? How long do you keep backups? Do you store them off-site?

**RESOURCE LINKS:**

AMR Research, [www.amrresearch.com](http://www.amrresearch.com)  
ARC Advisory Group, [www.arcweb.com](http://www.arcweb.com)  
Axeda, [www.axeda.com](http://www.axeda.com)  
Forrester Research, [www.forrester.com](http://www.forrester.com)  
Journyx, [www.journyx.com](http://www.journyx.com)  
LeanLogistics, [www.leanlogistics.com](http://www.leanlogistics.com)  
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