

The On-Demand Interchange

by [Jeff Moad](#), MA Editorial Staff

Abstract: As manufacturers embrace SaaS applications for externally focused processes, such as supply chain, warehouse, and logistics management, on-demand B2B integration needs rise.

Keywords: SaaS applications, on-demand B2B integration

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- [Taking Off the Blindfold](#)
- [The Year of SaaS, Finally](#)
- [On-Demand, SaaS Get Real](#)

A couple of years ago, when energy drink and chewing gum maker Mad Croc was just getting started, top executives, like those at a growing number of small, young manufacturing companies, opted to effectively outsource the tasks of deploying and operating enterprise applications by selecting a software-as-a-service (SaaS) alternative.

But officials knew their largest customers wouldn't cut them any slack just because Mad Croc was a young, small company relying on SaaS applications. Retailers, such as Target, CVS, and Costco, that carry Mad Croc's line of energy drinks and snacks would expect Mad Croc to be able to exchange order, advance ship notice, and other information via an electronic data interchange (EDI) system integrated directly with Mad Croc's back-end systems.

"The big-box retailers have their own, very specific requirements for EDI," says Chuck Andrews, an IS consultant who works with Mad Croc. "If you want to run with them, you have no choice but to comply."

There was just one problem: Mad Croc's SaaS ERP supplier, [NetSuite](#), didn't directly support business-to-business integration via EDI. So Andrews set out to find a third-party provider that, he hoped, could integrate with NetSuite and offer EDI as an on-demand service. Fortunately, Andrews found [SPS Commerce](#), a provider of SaaS-based B2B integration services that was just completing an integration between its platform and NetSuite. Mad Croc became the first

production user of the EDI integration, which supports basic documents, such as invoices and purchase orders.

Now, Andrews says, Mad Croc is anxious for SPS to add support for a wider range of EDI documents, including those supporting drop shipments and advance shipment notification.

Andrews isn't the only one likely to be pushing vendors for better B2B integration links to SaaS applications. Unfortunately, SaaS application vendors and providers of B2B gateways are just beginning to address the requirements of manufacturers such as Mad Croc for the kind of advanced EDI and other B2B integration capabilities that have long been standard features of on-premise enterprise applications.

"Initially, when the whole software-as-a-service model came out, it was seen as a way for small and mid-sized companies to get applications on the cheap," says Richard Douglass, global manufacturing executive at B2B integration software vendor [Sterling Commerce](#). "B2B integration wasn't a chief concern."

Indeed, experts say, because most of the early SaaS focus was on internal business processes, such as sales force automation and human resources management, there wasn't a big requirement for B2B integration in connection with SaaS applications. Most SaaS vendors tended to focus first on enterprise application integration rather than B2B integration.

But that's beginning to change because manufacturers such as Mad Croc are increasingly, considering using SaaS applications to automate functions such as material management, supply chain management, and warehouse management, all of which typically require significant B2B integration.

"We're seeing more companies say they're willing to buy into SaaS to cover a wide range of business processes, even manufacturing," says Ian Finley, an analyst at AMR Research. "Of course, saying you're willing to do it and doing it are two different things. But more companies are definitely open to the idea."

And vendors are beginning to offer SaaS applications that automate processes requiring more B2B integration. NetSuite, for example, recently enhanced its SaaS ERP with light manufacturing and supply chain management functionality. [Plexus](#) Systems has provided SaaS ERP and MES applications for some time. QAD provides on-demand versions of its enterprise applications. And [SAP](#) has promised that its coming Business ByDesign SaaS suite will support supply chain management, manufacturing, and warehouse and logistics management, among other things.

At the same time, several emerging vendors are beginning to deliver SaaS applications that go well beyond sales force automation and HRM. [SmartTurn](#) Inc., for example, is a 4-year-old provider of SaaS inventory and warehouse management applications for manufacturers with networks of smaller warehouses. CoreSense Inc. provides SaaS inventory management with a

retail focus. And [3PL Central](#) Inc. provides on-demand logistics and warehouse management for third-party logistics and warehouse operators.

As manufacturers contemplate using such SaaS systems to automate supply chain, order, warehouse, logistics management, and other processes that touch external suppliers and customers, B2B integration is looming as a larger concern.

Integration-as-a-Service

Of course, the idea of providing B2B integration as an outsourced service is nothing new. Vendors such as Sterling Commerce, GSX, [Descartes](#), and [Inovis](#) for years have provided value-added networks (VANs) as shared, hosted services that integrate business partners using EDI and other protocols.

But, experts say, traditional VANs aren't exactly suitable for creating B2B connections between SaaS applications. VANs tend to be expensive and to charge based on traffic and transaction volume, so costs can be unpredictable. VANs also can require significant up-front spending on services. Users of SaaS applications, however, are typically buying into a per-user subscription pricing model that emphasizes simplicity and cost predictability. So SaaS application users will require an "integration-as-a-service" approach to B2B integration, including easy, self-service setup as well as a subscription pricing model, says Rick Nucci, chief technology officer and co-founder of [Boomi](#), an emerging provider of SaaS-based integration, including B2B integration.

Some SaaS application vendors are beginning to address customers' B2B integration requirements, mainly by partnering with SaaS-based integration providers, such as Boomi and SPS Commerce.

SmartTurn, a provider of SaaS-based inventory and warehouse management systems, for example, has partnered with Boomi, which has integrated its SaaS B2B integration service with SmartTurn's on-demand applications using Web services. Manufacturers are using that integration to share sales and purchase order and fulfillment information with customers and suppliers, says Richard Yim, SmartTurn's vice president of product marketing. SmartTurn has also developed native EDI and flat-file integration support in its Inventory Grid SaaS offering, which allows manufacturers to manage multiple warehouses from a single system.

Similarly, NetSuite has partnered with SPS Commerce, which, in addition to developing an integration from its B2B service to NetSuite's SaaS applications, has integrated with 1,300 retail organizations, creating mappings that convert documents into the format required by each specific retailer.

At the same time, some vendors of SaaS business intelligence systems have taken steps to make data available via secure B2B integration. SAP's [Business Objects](#) unit, for example, has developed a Web-based portal for its Business Objects On Demand service that allows manufacturers to post information and reports dealing with things such as sales and pipeline

status. The portal can be fed by SaaS applications, such as NetSuite and salesforce.com, to which Business Objects has created integrations. And external partners, such as suppliers and distributors, can access the reports and data by using analytical tools, such as Business Objects' Crystal Reports.

Non-traditional Approach

The approach that Business Objects is taking is certainly different from traditional B2B integration, which tends to be transaction-based and to focus on document exchange. But, experts predict, SaaS applications may make such new approaches to B2B integration common in the future. Because SaaS applications, in effect, operate in the Internet cloud, it may be feasible, with the proper security, to directly integrate SaaS applications used by business partners in much the same way that enterprise applications are integrated inside a company's firewall today.

"We can treat this more like an application integration problem and directly connect applications to achieve business-to-business integration," Boomi's Nucci says. "That would let us finally eliminate all the EDI, X12, EDIFACT infrastructure and expense." Nucci says Boomi is working on an on-demand product that would do just that.

Better-established vendors of B2B integration software, however, have been slower to target SaaS applications.

B2B software stalwarts Sterling Commerce and [Seeburger](#) Inc., for example, have yet to release standard, easily configurable SaaS versions of their B2B gateway systems, preferring to offer their products on-demand on a case-by-case basis. And both companies say they only now are developing standard integrations with popular SaaS applications. Bill Reeves, until recently vice president for strategy and marketing at Seeburger, for example, says the company has been in "active discussions" with SAP about providing B2B integration for SAP's Business ByDesign service.

While Seeburger sees the demand for B2B integration from users of SaaS applications as relatively rare today, the company has little doubt it will grow in importance over the next few years. "We see SaaS as a trend that will grow massively over the next five years," Reeves says. "So all B2B software companies, Seeburger included, are developing products for this market."