

ERP Consolidation: And Then There Was One

Organizations today are shouldered with an embarrassment of riches: too many software systems. How to best deal with the dilemma? Consolidation. But the integration challenges are not few in number.

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Clear the ERP Clutter

IF TOO MANY cooks can spoil the broth, then too many software systems can certainly leave a bad taste in the mouths of enterprise users. Multiple software systems—particularly ERP systems—can slow the flow of data across the enterprise and make sharing that data with all the necessary parties a Herculean task.

Manufacturers often encounter this problem soon after an acquisition. If the new plants are running different ERP systems than the home office is, executives and salespeople end up scrambling to access that production data in anything resembling real time and making due with stale—and perhaps irrelevant—information. What's the smarter solution? An ERP integration project consolidating these multiple systems into one.

Of course, any project that involves moving around that much critical data must be handled carefully. Managers need to know which

systems will work well together and which need to be scrapped. And, ideally, the goal of any ERP integration project will be savings: less time spent collecting data and money not wasted on unnecessary software.

In this three-part guide, you'll find the advice and know-how needed to make any ERP consolidation project a success. In the first article, discover the [four business dimensions](#) that must be taken into account when consolidating ERP systems. In the second, learn how to combat [some common challenges](#) of ERP integration. Finally, find tips for seamlessly [integrating an ERP system](#) with supply chain management software. ■

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The Four Dimensions of ERP Consolidation

IT IS NOT uncommon for manufacturers to end up with multiple ERP systems, often from different vendors. Mergers and acquisitions often lead to disparate systems and many branches undertake Software as a Service ERP projects on their own.

There are serious downsides to having multiple ERP systems: complexity, cost, inflexibility and lack of accurate data on which to base decisions. For companies that have decided it is time to [consolidate multiple ERP systems](#), experts say there are a number of factors they need to consider when formulating a plan.

ERP consolidation involves much more than choosing to go from many systems down to one or two, or to run one ERP system for corporate financials and a second one for the other functions. Chiefly, it requires understanding how the ERP consolidation will map to business goals, because if it doesn't, the company shouldn't do it.

Murali Raghavan, senior vice president and head of horizontal IT services for iGATE, an integrated technology provider based in Bridgewater, N.J., said his clients are driven by objectives such as improving decision making for greater agility as well as improving the customer experience. Running multiple ERP systems often means customers can't get accurate information on, say, exactly what has been shipped and when they can expect to receive their orders.

"Manufacturers are asking how they can increase their companies' responsiveness to make a better experience for their customers," Raghavan said. In this case, ERP consolidation fills the gaps left by fragmented, disconnected systems.

When Rajeev Ranjan helps manufacturers [create ERP consolidation plans](#), he examines and assesses their status in four dimensions: business process, user perspective, technology

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and cost. A company's status on each will inform the ERP consolidation plan, said Ranjan, senior associate consultant at Infosys, a global consulting and IT services company headquartered in Bangalore, India. Here's how his analysis of the four factors plays out:

1. Business processes. “We look at the health and productivity of the business process.” For example, if the process in question is order fulfillment, Ranjan looks at fulfillment rates. If something is amiss, he next examines whether there is a system-based reason for the dysfunction and how much an ERP consolidation might help. “Let's say there are three different divisions under the same group, and they each do credit checks differently,” he said. “We look to see what kind of improvement they would get in this function by implementing a single ERP system for all three divisions. The quantification of benefits from optimizing business processes goes into the consolidation business case, along with the other expected benefits.”

2. User perspective. Dealing with multiple ERP systems can be difficult for employees—they

have to learn and remember more than one interface and feature set. What they can do easily on one system they might not be able to do at all on another. To cope and get their

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jobs done, employees often create a series of workarounds, which eats into productivity and morale. Improving the user experience for employees is often a significant benefit of ERP consolidation, once the learning curve for the new system is passed.

3. Technology. The technology questions that come into play are the same ones associated with an [ERP upgrade](#), plus a few more. For instance, is the organization running one or more systems that will soon be obsolete? Has it outstripped the system's capacity? Do the ERP systems interoperate or does it take a

lot of custom integration to pass information between them? How long does it take to make changes to the system? Are the multiple systems preventing flexibility? All of these factors will affect the type of ERP consolidation the company eventually decides to do.

4. Costs. It's only common sense that it's more expensive to keep multiple ERP systems running instead of consolidating on one system. Along with licenses and maintenance is the cost of enhancements. Often, Ranjan said, this

is so burdensome it's prohibitive—companies learn how to live without enhancements they need to keep competitive.

An analysis of all four dimensions underpins all good ERP consolidation plans. “You overcome what you are lacking, and you add what you want to achieve,” Ranjan said. Other factors like geographic-specific needs, applicable regulations and the need to minimize capital expenditures will also come into play.

—*Lauren Gibbons Paul*

Next-Gen Technologies Ease ERP Integration Woes

THERE'S GOOD NEWS and bad news on the ERP system integration front, according to industry experts. While far less of a business obstacle today thanks to emerging technologies and maturing platforms, ERP integration remains an evergreen challenge for IT organizations as they advance enterprise systems to support a plethora of next-generation capabilities, including the cloud, mobility and new data types.

Historically, companies have struggled with nailing down the right integration architecture for syncing an ERP backbone with other enterprise systems, such as CRM or supply chain management—or even trying to create synergies between [disparate ERP platforms](#). However, experts say many of the complexities surrounding point-to-point integrations between ERP and other enterprise systems have been mitigated thanks to technologies such as Web services, and because ERP vendors

are fine-tuning their platforms and integration strategies to better support a heterogeneous environment.

“If you do integration right and make use of underlying technologies like service-oriented architecture, Web services and using standard business objects, it makes it much easier to integrate than it ever used to be,” said Cindy Jutras, president of Mint Jutras, a research and advisory firm specializing in enterprise applications.

Despite the progress, ERP system integration is still far from being a slam dunk. The growing requirement to integrate not just with internal applications but with the core systems of key suppliers and customers has upped the ante, experts say, and many manufacturers still have to contend with syncing up with legacy systems that tax custom integrations as the core ERP system is upgraded with new functionality.

Complexity around integration is also tied to the growing requirement to sync ERP not just to one or two primary systems, but to an array of sources, typically from multiple vendors and each with different upgrade schedules, according to Christian Hestermann, an analyst at market research outfit Gartner. “The more connections and integrations, the more complex the whole picture is,” Hestermann explained. “We’re talking supply chain systems, product lifecycle management, CRM—all of these systems follow individual roadmaps in terms of when upgrades need to be deployed.”

ERP SYSTEM INTEGRATION GETS CLOUDY

One of the newer wrinkles surrounding ERP system integration is [cloud services](#). On one hand, the cloud delivery model makes it easier for companies to get up and running on core applications like ERP and CRM more quickly.

On the other hand, basic integration can be more straightforward, especially if the vendor incorporates specific prebuilt connections as part of its overall service offering simply by supporting standard Web services.

It was that ease of deployment and integration that led The Lean Cos. to pick a cloud-based ERP offering, Epicor Express, when it decided to replace a legacy warehouse distribution system as part of a move to standardize three divisions on a common platform. “Cloud is where the future is going, certainly for smaller companies,” said Terry Edgar, president and CEO of The Lean Cos., a contract manufacturer of wire and cable harnesses as well as a provider of logistics services. “That’s driven by the fact that it’s more cost-effective from the perspective of personnel and equipment purchases.”

Edgar anticipated that Lean’s long-term integration needs will be served more cost

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effectively with the cloud approach, as the delivery paradigm creates an easier path when it comes to upgrades and patches. “The good news is when software upgrades happen you have to make them,” he said. “In the past, when software revisions came up, it was a significant task to go and retest all the integration points and make sure you were pulling data correctly.”

While the cloud closes the door on some integration challenges, it is also an entrée into other related issues. Many companies have a standardized ERP system deployed at the corporate level while various divisions turn to a cloud-based system for CRM or other complementary applications—an easier approach that doesn’t require bringing in IT, noted Josh Greenbaum, principal consultant at Enterprise Applications Consulting. The problem then becomes trying to integrate those cloud-based silos with the existing on-premises enterprise systems.

“A lot of companies woke up after the Software as a Service binge and found themselves with cloud-based HR or a Salesforce cloud that can’t be easily integrated to the back office,” he said. “It’s an interesting new dynamic in integration when you’re trying to connect the cloud and on-premises and you need to do it without the kind of command and control that exists in the data center [where] everything is under one roof. The irony of the cloud is that it’s easy to deploy and provision, but it doesn’t integrate out of the box.”

MIXING MOBILE

The rise of the industrial Internet is having another impact on ERP integration, Greenbaum noted. As companies start to gather data from sensors on plant floor equipment or on shipping pallets, for example, that data needs to be integrated with traditional ERP data, which

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—JOSH GREENBAUM, principal consultant at Enterprise Applications Consulting

is a completely different animal. “It goes from being a transactional integration to an analytical one, and you have to take into account very different kinds of data and different notions of what is real time,” he explained.

[Mobility](#) poses another greenfield integration area, according to Jutras. “Whether on a business trip or at the soccer field, company execs are going to want to get answers immediately,” she said. “That means you have to take the

mobile device into account and maybe run a smaller, purpose-built app [that] connects back to the data supplied by ERP.”

Despite all the progress that’s been made, Greenbaum stressed that there is still no magic bullet for ERP integration. “At the end of the day, you’ve got to plan this with IT and line of business sitting down at the table from the get-go,” he said. “I’ve been giving that same advice for 25 years.” —*Beth Stackpole*

Strive for Seamless ERP-SCM Integration

ENTERPRISE RESOURCE PLANNING and supply chain management are the lifeblood of most manufacturing organizations, and yet they are two very distinct systems. As the lines between the pair continue to blur, the question remains: Are manufacturers better off with a monolithic, all-in-one system, or implementing two “best of breed” packages with a focus on tight [ERP-SCM integration](#)?

As with most enterprise-class IT deployments, the answer depends. Smaller companies with less-sophisticated processes and limited IT bandwidth might have an easier time supporting a single system that provides a base level of core functionality in both areas, experts said. On the other hand, larger firms with complex supplier and partner networks are more apt to benefit from separate packages that offer a deeper set of functionality.

While there is no universal deployment architecture, experts agreed that there is no

getting around the requirement for SCM and ERP to be tightly coupled in order for manufacturers to fully realize the benefits of integrated business processes.

“Supply chain operations are the bread and butter of a manufacturing organization,” explained Mark Humphlett, director of ERP for Infor. “Production planning and scheduling and managing assets as effectively as possible are important to the bottom-line profits of an organization, and that’s why you need seamless integration between ERP and SCM.”

DEGREES OF INTEGRATION

The definition of a seamless ERP-SCM integration will vary depending on the manufacturer’s business requirements. At a base level, integration means that as new orders are entered into the ERP system, the information is handed off to the supply chain application to update

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forecasts, production planning and scheduling in as real time as possible, Humphlett said. Manufacturers looking to extract data from the systems to do long-term demand forecasting have far less of a requirement for real-time ERP integration than those that strive to do scenario planning to map out daily manufacturing resource planning (MRP) runs.

“It’s really about what your planning and forecasting window is,” explained Josh Greenbaum, principal consultant at Enterprise Applications Consulting. “If you want to forecast in real time and make a change based on activity, you have to have bidirectional integration. If you’re looking at revising a six-month plan based on this month’s sales, you really just need a good data feed.”

While having a single, combined system or two systems from the same vendor certainly makes life easier, it’s not a mandate today, thanks to integration technologies like service-oriented architecture (SOA) and new middleware capabilities. That’s especially important in today’s business climate, where large and small manufacturers are interoperating with outside suppliers and customers,

most of which are running different systems, noted Cindy Jutras, president of Mint Jutras, a research and advisory firm specializing in enterprise applications.

Jutras advised clients to search out ERP and SCM platforms that support technologies like SOA and hub-and-spoke [integration architectures](#) as opposed to the traditional style of point-to-point integrations. “In addition, look for tools that let you easily define business objects because if you can map to standard business objects, you are 90% of the way there towards integration,” she said.

INTEGRATE FOR A TIGHTER SUPPLY CHAIN

For Metcam Inc., a fabricator of precision sheet metal components and assemblies for original equipment manufacturers spanning a wide variety of industries—including telecommunications and fire and security—integration of any sort was off the table when it came time to modernize a legacy, Unix-based, green screen MRP system.

One of the key reasons for upgrading to a newer system—in this case, Infor’s Syteline

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8—was to have the entire firm's financials and supply chain and materials-planning activities integrated into a single database in order to streamline operations and reduce the risk of error, according to Bruce Hagenau, the company's president.

“For us, supply chain management starts with taking orders via EDI [electronic data interchange] and ends up with making sure the packing slip and invoices are properly formatted for each customer,” he explained. “If you don't have all the various steps between those two endpoints in the same system, you end up double entering data, and there's a lot of room for transactional errors.”

At \$25 million in revenue, Metcam doesn't currently have a need for sophisticated SCM capabilities, but Hagenau anticipated that will change over time since the company is growing. That's another reason the manufacturer opted for a solution that delivers both ERP and SCM functionality as part of one integrated package working off a single database. “I think integrated makes sense regardless of the size and scale of an organization,” he said. “Between

Infor and its various partners, we will be able to find additional solutions to meet our needs as we continue growing.”

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—BRUCE HAGENAU, president of Metcam Inc.

In fact, Hagenau views the coupling of ERP and SCM as an on-going journey, building out new levels of capabilities one step at a time. “It's not the kind of thing you're ever really finished doing,” he said. As Metcam moves from MRP to advanced planning and scheduling, there's a different level of discipline required with regard to the rigor of job orders, bills of materials and shop floor transactions. “It's not like you can go from the system we had to APS [advanced planning and scheduling] by flipping a switch,” he said. “You can't accomplish everything right out of the gate.” —*Beth Stackpole*

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