



SearchManufacturingERP.com

E-Book

## Manufacturing IT Guide: How to evaluate and buy small to mid-size ERP platforms

The challenges of evaluating and purchasing the right ERP platform keep growing for SMBs as well as midmarket organizations. Not only are there more vendors to choose from and more features and functions to decipher, but now there are new software distribution methods such as Software-as-a-Service (SaaS) and open source options as well. And for some SMBs, there's not even an IT team to guide them through the process.

This eBook offers best practices for SMBs and midmarket organizations evaluating ERP platforms and provides suggestions on how to avoid procurement pitfalls.

*Sponsored By:*





# Manufacturing IT Guide: How to evaluate and buy small to mid-size ERP platforms

## Table of Contents

[Lack of IT resources constrains SMBs when buying ERP software](#)

[SaaS distribution method, open source model complicate ERP picture for SMBs](#)

[Experts offer advice for the ERP software selection process](#)

[ERP pitfalls and other gotchas](#)

[Resources from our sponsors](#)

- [Consona](#)
- [Plex Systems](#)
- [SAP](#)

## **Lack of IT resources constrains SMBs when buying ERP software**

By Alan R. Earls, SearchManufacturingERP.com contributor

John Burks, director of IT at A.C. Legg, a producer of food seasonings, recently made the potentially painful transition from a custom-built legacy software system, which had helped run the company for many years, to a newer, standardized ERP product. The previous system had been custom-programmed on an AS400, and "it had been changed so many times you couldn't really say what it was," Burks said.

Furthermore, the company's ERP system had to meet new food safety standards, some of which were required by changes in the Homeland Security program. "We had to be able to track everything," Burks said. "And our old system couldn't track anything."

But like many IT directors, Burks found the spectrum of ERP vendors and products daunting. He looked at some enterprise-oriented packaged ERP systems but was concerned about their cost and the amount of customization that would be needed for a deployment at A.C. Legg. Fortunately, a reference through another of the company's suppliers led to a call from a vendor that had a suite of applications for process manufacturers, including an ERP package that had a focus on the food and beverage industries. After viewing demos of the software, Burks was convinced he'd found a good fit.

Not all SMBs and midmarket organizations – companies with fewer than 1,000 employees -- are so lucky. Even though they need ERP functionality just as much as enterprises do, these companies have a harder time fulfilling their requirements for an ERP package because they lack the IT resources of larger organizations.

That lack of leadership and vision for delineating the benefits of ERP is one of the biggest challenges for an SMB evaluating ERP packages, according to Karen Patterson, senior consultant with Revolution Group, a consulting company in Westerville, Ohio, which helps SMBs deploy ERP software. Furthermore, that challenge is often made more difficult, she said, because SMBs frequently do not have a dedicated CIO who can drive progress.

Christian Hesterman, a Gartner research director who focuses on the midmarket ERP arena, said that the biggest restriction facing midmarket ERP buyers is the limits of their own IT department (that is, assuming they even have an IT department). As a consequence, SMBs often try the shortcut of one-stop shopping: They buy as much as they can from one vendor or as few vendors as possible. Likewise, they typically can't afford a long selection process that involves decision-makers from several departments or lengthy market analysis. Instead, they're usually more comfortable working with a local partner, perhaps a consultant or systems integrator, often someone they have heard of through word of mouth. "Whatever [that partner] offers has a high likelihood of being bought," Hesterman said.

Unfortunately, he noted, that kind of decision-making process tends to preclude vendors that could be ideal for a given SMB. "When you talk about ERP, most people will mention SAP and Microsoft and just a few other players," he said. "But in fact there are hundreds of vendors, many of which have packages that can be a very good fit for SMBs in specific industries."

Furthermore, those vendor distinctions can be important. "In the past, SMBs might have been served well with a generic solution," Hesterman said. "But more and more, there is a competitive advantage in having specific industry support. Such support can not only reduce the need to customize an off-the-shelf ERP solution but can also provide access to de facto industry best practices that might be embedded or in some way part of the solution."

Are there dangers in buying from less-well-known companies? Companies do go out of business or get acquired, but Hesterman said that it is rare for a product to disappear completely as long as it has "a certain minimum number of users." If someone involved in procurement at an SMB or midmarket organization is really concerned about the long-term viability of a product, he should make a point of documenting the database structure or perhaps even obtaining copies of source code in order to be able to switch to another software product if that becomes necessary.

Another risk that SMBs face – also related to their lack of IT resources – is the tendency to simply go to the various departments in their company and assemble a wish list of features and functions, based on input from anyone and everyone. Hesterman recommends that

SMBs instead “think about what makes them different, where they are strong, and where they need the most support to be competitive.” That determination, he said, should drive the ERP selection process toward an optimal choice of product.

To cut to the chase, he said, the purchaser at any midmarket organization should focus on the fatal flaws: the six to 12 functions within the business that either need improvement or would damage operations if they failed to operate smoothly. The next thing to factor in, he said, is where the company wants to go. These are the things you should try to address with your ERP investment, in terms of selecting the appropriate modules, features and functionality.

According to Hesterman, SMBs should also avoid ERP software that requires any kind of complex integration tasks – the type of requirement that might arise in building a best-of-breed solution from multiple point products. “You should look for broad solutions that serve most of your departments and functions,” he said, “and then deal with any additional needs separately.”

Perspective is important, according to Bob Parker, an analyst with Manufacturing Insights (a unit of IDC). According to Parker, a former CIO at a midmarket company, “in the old days, people like me identified [themselves] as either DEC shops or System 36 shops,” noting that there is no similar kind of midmarket penetration by the largest ERP vendors today. “Many companies are still successfully running their business on legacy applications while others have selected a solution from a smaller ERP vendor,” Parker said. His point is that ERP is important nowadays, but it may not represent the most crucial investment for midmarket companies.

“Everyone usually has some kind of ERP function -- it is no longer a big differentiator for the business,” Parker said. Today, the differentiator is in the area of applications that can provide analytics, such as business intelligence packages.

## **SaaS distribution method, open source model complicate ERP picture for SMBs**

By Alan R. Earls, SearchManufacturingERP.com contributor

Not so long ago, when it came to ERP software, there was only one choice for SMBs: enterprise-grade name-brand packages running on the SMB's own collection of servers. But now there are options, including on-demand ERP software, or Software as a Service (SaaS), or ERP in the cloud (call it what you will), as well as open source ERP.

"Software as a Service is becoming a very viable alternative for SMBs as the marketplace matures, and vendors are developing feature-rich and stable applications," said Karen Patterson, senior consultant at Revolution Group, a technology consulting company headquartered in Westerville, Ohio.

According to Patterson, SaaS can make it possible for the SMB to leapfrog into -- and remain current with -- continually changing technologies while maintaining a limited internal IT staff. In addition, she said, "a properly chosen SaaS selection can link SMBs with industry peers, essentially using 'group think' to drive development of an industry- best-practices application."

Through this shared aspect of SaaS, subscribers can enjoy the benefits of continuous improvement and application development performed by all subscribing members while also contributing their own development efforts to the application.

One company that has embraced SaaS ERP is Vetrazzo LLC, a company that produces countertops from recycled glass. When sales of its countertops began taking off, the Richmond, Calif., company discovered that it badly needed an ERP system to handle its expanding business.

Vetrazzo didn't have an IT department, though, and its executives wanted to avoid having to purchase -- and manage -- hardware infrastructure. So with that self-imposed restriction, the company chose to build its own ERP solution from a selection of online components,

according to company CEO and co-founder James Sheppard. With the help of Salesforce.com partner The Claiborne Company, a consulting firm that works with the SaaS CRM product salesforce.com, Vetrizzo customized an existing ERP prototype to fit its specific business processes: customer service and order management; finished goods inventory management; production planning and scheduling; raw materials management; shipping and logistics; document management; and warranty management.

Through this process, Sheppard said, Vetrizzo was able not only to build and deploy an ERP system in just seven months but to achieve a full return on investment in another eight months. And, he noted, to this day the company still gets by just fine without an IT staff.

Ray Wang, an analyst with Forrester Research, cites the recent study he wrote, titled *Competition Intensifies for the SMB ERP Customer*, which shows that although a majority of SMBs are still wary of SaaS, it gives everyday business users the chance to be "in the driver's seat" in terms of making the major decisions around software.

Furthermore, many prospective buyers turn to SaaS because they can deploy a SaaS solution faster, which means less strain on the business. Since licensing fees for the typical SaaS model are charged on a per-user and/or per month basis, SaaS offers the additional benefit of turning an ERP investment into an operating expense rather than a capital expense that might require top management approval.

"For SMBs, SaaS has what you need," Wang said. "It offers rapid implementation and very appealing pricing models such as pay-as-you-go."

However, SaaS has a potential downside. Usage fees can grow beyond initial expectations. And once you're locked into a particular SaaS vendor, moving to another platform may be difficult. The key, according to Wang, is careful shopping -- making sure you know how you're likely to use the software and the technical requirements that you may have to meet in the future if you need to change platforms.

On the other hand, open source software can, like SaaS solutions, lower initial costs while providing more direct control over the software. Tony Im, practice director for Sciquest, a company that provides SaaS procurement software to improve supply chain processes, was

skeptical when he first heard about open source ERP. But conversations with users have convinced him that open source can be the right choice for some organizations.

"There is a lot of excitement now because [open source] applications provide good functionality for most of the basic aspects of ERP," Im said. "And they can be readily tailored to the needs of a specific organization, either through custom programming or through integration with a specific functional application."

In other words, an open source ERP system can provide good, basic functionality, leaving room in the budget to acquire other critical functionality, whether that functionality is custom-built or from another vendor. Im admits, however, that this can all add up to more cost and complexity. "You need to be realistic about your internal capabilities," he said.

According to Ross Patterson, director of implementation services for Panorama Consulting, an SMB's support staff would ideally have the following skills in order to implement and maintain open source software:

**Advanced system administration:** Your team must be able to manage file systems and permissions, install software by script or by compiling from source code, manage users and groups, and manage memory and performance issues.

**Database management:** Your team must be able to install a relational database management system and secure it, create databases and tables, and make minor changes.

**Web services support:** Your team must have intermediate to advanced knowledge of Apache software.

**Knowledge of Java, PHP or both:** Your team must have intermediate knowledge of scripting for PHP and familiarity with Java Virtual Machine Architecture.

**Miscellaneous component knowledge:** These needs vary widely, based on the components of the software, but your team must have advanced knowledge of installation of packages and source code.



## **Experts offer advice for the ERP software selection process**

By Panorama Consulting Group, SearchManufacturingERP.com Expert Contributors

Most companies that are evaluating potential ERP solutions confine themselves to tier I vendors. If you have a small to midsized business, there are countless other options. For a large company, there are dozens of viable options that can deal with complex businesses and scale for growth.

Here at Panorama Consulting Group, we encourage our clients to go through the ERP selection process with their "eyes wide open." When our company embarks on a software selection project with clients, we start with more than 80 different ERP packages. Most are offerings from established companies with established client bases. Many can deal with complex requirements, such as product configuration, product development management, engineering change orders, project accounting, etc. The only difference is that they don't receive the publicity and marketing exposure that the larger guys have. Based on our experience, they are often a better fit, more flexible, and less risky than typical tier I software options.

There are plenty of viable alternatives to the household ERP names. Many of these companies are well established, with international offices, international customers, and user counts ranging from 10 to 1,000s. And many of their offerings will cost much less to purchase and implement than a tier I option.

In addition, these smaller vendors often provide more functional specialization and industry focus than traditional ERP options. A complex, engineer-to-order type of discrete manufacturer is not likely to want a package that also tries to deal with the processes for high-volume, make-to-stock manufacturing. Instead, you should consider a solution that handles your type of business very well rather than one that tries to be "all things to all people."

## **Six steps to an effective ERP assessment and software selection**

To simplify the evaluation process without overlooking a package that may be a strong fit for your organization, we recommend a multiple-phase process to evaluating vendors. This process includes identifying your "to-be" business processes and business requirements, which are both critical to an effective ERP assessment:

1. Identify both industry-specific and general ERP packages. Based on your business requirements and budgetary needs, you will probably eliminate most vendors. We typically recommend developing a "long list" of six to eight vendors.
2. Once the long list has been compiled, identify the key requirements that a package must have in order to make the short list. These "deal-breakers" should help you arrive at three to four short-listed vendors. Typically, discussing business requirements with each of the long-list vendors and getting an RFI (request for information) response will be the basis for moving to a short list.
3. Conduct a detailed assessment and analysis of the short-list vendors. Identify and prioritize the detailed business requirements that your organization needs in a potential ERP package. From these requirements, create demo scripts to ensure that each vendor demonstrates its product as it relates to your business processes. Vendors like to focus on their strengths and not necessarily on how their software fits with your business. This is the time in the evaluation when you should issue RFPs (requests for proposals) to the short-list vendors. The responses will include their costs, software capabilities, and proposed implementation strategy.
4. During the short-list and demo evaluation, involve key users and ask them to complete evaluations for each of the vendors. These evaluations should be quantitative assessments of how well the vendors' products address the key business requirements in demo scripts.
5. In parallel with the functional assessments, assess the technical capabilities of the short-listed vendors. This should include areas such as scalability, ability to integrate with legacy systems, openness of the architecture, etc. These technical factors may be as important as your functional business requirements.
6. Make a decision based on the input from the vendor evaluations and technical assessments. Gather the input you've received from the various assessments, and prioritize the vendors' strengths and weaknesses. Finishing your selection may require more of a quantitative ranking and weighting to evaluate how well each of the packages meets your business requirements.

Choosing an ERP software package is one of the most important decisions your organization will ever make. It is also one that will have long-lasting effects, positive or negative, on your company's financial performance. Many ERP implementations last for 10 years or more. This process may seem overwhelming, but it is a good way to consider a comprehensive set of options in order to arrive at a decision. Given the importance of such a decision, it is worth taking the time to make the vendor software selection that is right for your organization.

By the time your evaluation and selection is complete, you should have a good understanding of the commitment you are making. ERP projects are usually more complex and costly than expected, but it is better to understand that fact before your ERP decision than when you are already in an implementation.

## ERP pitfalls and other gotchas

By Alan R. Earls, SearchManufacturingERP contributor

How many ways are there to mess up an ERP project? Lots of them. Here are 10 pitfalls that every SMB should bear in mind.

1. Not being open to change. Most SMBs have come to depend on highly customized legacy applications or combinations of desktop solutions (spreadsheets, databases, etc.). The problem is that these applications fit the process owner very well – too well -- and are often difficult to reproduce in packaged ERP systems. As a result, the organization must realize that business process re-engineering will probably be necessary, and application modification may be required to install any major ERP system.

Translation? You may have to change the way you do things or change the way the application works. "Expecting, planning for and preparing participants for this process, both in cost and time, during implementation is important for setting expectation and acceptance of the application," said Karen Patterson, senior consultant with Revolution Group, a consulting company in Westerville, Ohio, which helps SMBs deploy ERP software.

2. Snap decisions are bad decisions. There's no substitute for really doing your homework. Because you'll have to live with an ERP system for a long time, it is critical to "invest the time to really understand the organizational requirements, prepare a thorough demo script, and hold the software vendor to the details of the script," Patterson said. Another caveat: Never make assumptions about the capabilities of the application simply based on brand name, installed base or a flashy sales demo.

3. Don't skimp during go-live. Too many companies make a significant investment in purchasing the software but then skimp on the implementation. "Dollars 'saved' in limited training and implementation assistance resources often lead to frustrated users, incorrect assumptions and system utilization, and poor system acceptance," Patterson said. This type of thinking can also lead to significant risk during the difficult go-live period.

4. Don't create a short list too quickly. To get a competitively priced ERP solution, you need real competitors. In other words, don't just focus on the company that looks to have the best product and then, as an afterthought, add a few random companies to the RFP mix. "Vendors will recognize that for what it is," said Christian Hesterman, a research director at Gartner who focuses on the ERP midmarket. "And if they know they aren't facing real competition, you are in no position to negotiate."

5. Missing the forest for the trees. The thrill of building a new ERP application can be overwhelming, and some companies spend too much time and energy looking at the pieces – how this element or that application will revolutionize business – losing focus on the big picture as a result. "It is like buying an engine, some paint, some tires, and some seats instead of concentrating on buying a car," said Jesus Mantas, North American general business leader, IBM Global Business Services, who is responsible for midmarket ERP customers.

6. The "supertechie" syndrome. An ERP project (or any other large-scale IT project) takes lots of time and lots of expertise. Many SMBs with an IT department believe they'll be able to handle more of the implementation tasks than is practical for them, Mantas said. "These people already have full-time jobs," he said, "so a lot of organizations end up in trouble when they expect them to also implement an ERP system."

7. Not thinking long-term. It's hard to think long-term when there are so many other issues involved with an ERP implementation. But Mantas said it is critical that SMBs and midmarket organizations assess long-term maintenance and support costs very carefully. "They may have had a solution in place for the last 30 years that's been run by one person," he said. "But a new ERP system may have more sophisticated and costly requirements."

8. Buying more ERP system than you need. One senior manufacturing business manager for an ERP vendor said that this happens when companies don't make their existing processes more efficient before automating them. And it's further driven by fear of not "doing enough." In essence, he said, SMBs that skip this step just make mistakes faster and automate mediocre performance.

9. Not recognizing how critical process and system integration is. "SMBs must see the need for cross-system and inter-process integration," the manufacturing business manager said. The point is that no application can operate in a vacuum, and ERP is even more likely to fail if it is left isolated and detached from cross-system and cross-process inputs. For instance, an ERP system that returns reports showing reduced inventory costs without also showing increased product defects in the assembly process is not doing its job. The connection must somehow be made that the reduced inventory costs are associated with lower-cost, lower-quality supply items and that the resulting defective products result in cost increases.

10. Failing to get executive ownership. Companies get all excited about a major upgrade. They may even have everything signed, sealed and delivered. But if top management doesn't really "get it" or isn't fully committed to change, there's going to be trouble. Make sure you've got executive ownership of the program and, while you're at it, have a clear and convincing explanation of how the technology benefits everyone involved: customers, employees, suppliers and service organizations.

## Resources from Consona



[The Enterprise Resource Planning \(ERP\) Selection Process Survival Guide](#)

[The Best Way to Buy ERP Software in 2010](#)

[Six Steps to a Successful ERP Implementation](#)

## About Consona

Consona ERP software and services are matched closely with specific customer needs, incorporating deep industry knowledge and experience. Plus, they are continually enhanced to meet evolving customer requests and suggestions. Notable for ease-of-use, fast navigation, tailored views and tight security, Consona applications deliver the functionality without the fuss – solid applications that make users' jobs easier, not more cumbersome.

Consona ERP software products are designed to bring the entire company together by offering broad application coverage that allows all departments to use the system effectively, including management, sales, engineering, purchasing, operations, manufacturing, quality, customer service, finance, accounting, and human resources.

## Resources from Plex Systems



### [10 Critical Questions to Ask a Manufacturing ERP Vendor](#)

### [Tips for a Pain Free ERP Implementation](#)

### [ERP in Manufacturing AXIS Report](#)

## About Plex Systems

Plex Systems, Inc. develops Plex Online, a comprehensive Software as a Service (SaaS) solution for the complete manufacturing enterprise and the only solution to achieve the prestigious Champion ranking in Aberdeen Groups "ERP in Manufacturing AXIS Report." Plex Online offers industry-leading features for virtually every department within a manufacturer, including Manufacturing Operations Management; and Quality Management Systems for the shop floor, Customer Relationship Management for sales and marketing, Supply Chain Management for procurement, and Enterprise Resource Planning for finance and management. Plex Online' delivers a "shop floor to top floor" view of a manufacturer's operations, enabling management to run their business at maximum efficiency. Founded in 1995, Visit [www.plex.com](http://www.plex.com) for more information.



## Resources from SAP



[Saugatuck Technology: ERP for Small and Mid-sized Companies: Time for a Decision](#)

[Think Your Organization is Too Small for ERP? Think Again](#)

## About SAP

SAP's vision is for companies of all sizes to become best-run businesses. Best-run businesses transform rigid value chains into dynamic business networks of customers, partners, and suppliers. They close the loop between strategy and execution, help individuals work more productively, and leverage technology for sustainable, profitable growth. This vision is in keeping with SAP's mission to accelerate business innovation for companies and industries worldwide - contributing to economic development on a grand scale.