

**Question:**

**Which is the better software purchasing strategy, integrated suite or best-of-breed?**

**Answer:**

**Yes.**

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# **Integrated ERP Suites vs. BoB**

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White Paper - December 2006

## **Table of Contents**

Introduction.....	2
All Solutions Are Not Created Equal.....	2
Portrait of an Integrated ERP Environment.....	5
What's going on here?.....	10
Enabling the Financial Value Chain.....	12
Conclusion.....	13
Selected Bibliography.....	14

An **Enterprise Resource Planning (ERP)** system is an organizational and management solution based on information technology towards challenges and problems in the business environment (Laudon and Laudon, 1998). In most cases it is a misnomer, there is very little Planning in an ERP. Resource is simply a place holder to make a three letter acronym. Thus, the key is “Enterprise”.

The selection of the most appropriate solution is a semi-structured decision problem because only part of the problem can be handled by a definitive or accepted procedure such as standard investment calculations. On the other hand, the decision maker needs to judge and evaluate all relevant (and intangible) business impact aspects.

## ***Introduction***

The choice -- and therefore debate -- between "suite" versus "best-of-breed" software is as old as enterprise software.

In the Enterprise Resource Planning (ERP) space, the debate has become particularly vigorous, in part because of some industry consolidation that did -- and didn't -- happen. First, about a half-dozen major vendors rolled up other software providers and can now boast wide-ranging "ERP Suites." But the long-predicted demise of the "point" solutions providers never happened and many best-of-breed (BoB) suppliers continue to thrive.

How do you choose an ERP? What is an ERP? How do you decide between best of breed and integrated suite? Let's see if we can shed a little light on this problem.

With more players in every category and a rapid pace of change in technology, the landscape keeps shifting and the choices seem more complex than ever. An effective solution is not one that merely addresses current business functions. Today's solutions must be constructed so they are able to evolve as new information technology (IT) and business objectives develop over time. Just as a non-swimmer shouldn't jump into a lake, relying on enthusiastic swimming instructions shouted from the shore, an organization should not select an ERP by relying on sales presentations about a provider's latest software tools and industry expertise.

ERP vendors tend to lag behind best-of-breed (BoB) software providers, who traditionally target niche markets, requiring specialized solutions. The battle is quite old now with well established dynamics. Interestingly a very clear theme has emerged from all the battle fronts between ERP and BoB vendors. Despite being the followers, the ERP vendors eventually claim a competitive edge on niche BoB vendors, due to their ownership of financial, human resources and supply chain data. Although initially, they compromise on market share, ERP vendors hit the market when it is ripe and give the BoBs a tough competition. These dynamics are definitely causing a disadvantage to niche players, but for now there seems no apparent way to avoid this. What is this disadvantage – it is integration.

Integration is far more than a clever buzzword. Most people wouldn't go to an auto dealer and settle for parts that hopefully would fit together once assembled after the purchase. Yet, it is rare to find a single vendor that can effectively deliver a comprehensive, fully integrated solution.

## ***All Solutions Are Not Created Equal***

Simply put, IT infrastructure supports business needs, and many of them are mission critical. Therefore, the approach to supporting that infrastructure is crucial – especially where the business function interacts with customers in real time. The support strategy has changed. Leading companies have shifted their focus to integrated business processes, rather than discrete functions, and from specialized roles to interactive teams. Simply installing technology and then monitoring it and taking necessary steps to fix it when it's broken is no longer an effective approach.

Is all-in-one all you need? This next sections attempts to look at both sides of this debate.

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### **Integrated Suites**

If time and money were of no consequence we'd all buy our fish from coastal fishing towns and our vegetables from the local farmers' market. But the reality is that the convenience of buying these products from one supermarket makes it the preferred option.

Similarly, best-of-breed software applications have their place in the market, but most businesses should not set their sights on this approach. As businesses move forward, they should think about integrating their systems to get the most value from their IT investment, capitalizing on what they already have and ensuring they avoid painful integration issues as they grow.

The way to avoid growing pains is by viewing business IT as a facilitator, helping to solve problems across the organization. While best-of-breed applications might solve individual pain points, an integrated suite provides the convenience and the longevity to achieve ongoing returns.

Larger vendors offer a trustworthy network of smaller independent software vendors (ISV) that the vendor can rely on to add tailored layers to its base technology. The customer benefits from 1) the specific vertical expertise of the ISV, 2) the stability of ongoing R&D that is likely from a larger player, as well as 3) the clarity of vision that

### **BoB**

Memories are still fresh of dotcom-era companies with an IPO to their name, but less in the way of actual proven software. So it is understandable that company CIOs have now gone the other way. They seem anxious to purchase all their software from a set of known vendor behemoths.

Unfortunately, IT purchasers who live by the maxim 'no-one ever got fired by buying their software from dinosaur x' are throwing out the baby with the bathwater.

You simply can't buy everything you need from one vendor, even if you want to. Even SAP, the colossal German ERP software vendor, covers only 30% to 70% of a company's business model, according to its own CEO.

For the remaining 30% to 70% you need other features. But surely, you should standardize on as few vendors as possible?

Or perhaps not. Software companies became successful in the first place by doing one thing very well. Oracle did it with databases, Microsoft did it with operating systems and SAP with financial 'PeopleSoft').

It is critical to inject some business judgment here. I have been working with a customer who compared my previous company's software with their

## Integrated ERP Suites vs. BoB

should promise the ongoing support of the product.

The integrated suite approach comes into its own in its ability to cut 'fat' from your business. If used effectively, integrated applications will enable you to make your business leaner. They can streamline wasteful processes (for example, removing costly, paper-based invoicing and replacing with e-invoicing).

They can put information in the hands of the right people at the right time, allowing them to review performance and react to business functions. They can improve efficiencies by reviewing processes, using integrated applications to increase productivity and cut costs. They allow you to interact better with customers through customer insight applications, develop closer relationships with customers and meeting their needs more effectively. They also ensure employees are using the technologies to improve business processes and effect change.

A critical success factor is for organizations to invest in business applications that can be exploited to their fullest extent. Broader business requirements should be borne in mind, and IT should enable business barriers to be broken down. The familiarity and ease-of-use of an integrated suite can offer the benefits of continued R&D, enabling businesses to reap the greatest rewards from their technology investment.

existing product, and found a new project could be delivered in one-fifth the time of its existing technology. This project was delivered in 60 days and had a payback period of under-two months.

With this kind of return, who cares about long-term issues? The alternative - putting up with inferior applications that take five times as long to do the same task - would simply be an abuse of shareholder funds.

I'm not advocating that every part of the business make independent technology decisions. The key is to standardize aggressively on infrastructure - networks, operating systems and databases. These technologies are highly mature. However, business applications are what truly deliver value, and for these, don't constrain your company. Innovative vendors can add tremendous value in their own specific areas of core competence. There is nothing wrong with thinking outside the box!

software.

But it's also true that as soon as companies step outside their core competence, they are less successful. Once vendors unceremoniously drop their non-core products, customers are left to 'migrate' (for the definition of 'migrate' see 'rewrite' in the dictionary) their applications, perhaps with 'help' from the vendor (see 'pay', see also 'chutzpah').

But buying core products from large vendors isn't without risks. Takeovers can signify the end of established

So what's the answer? What we need is a more proactive strategy in order to meet the challenge of delivering timely, consistent, high-quality information to our corporate decision makers. A proactive, integrated management approach can dramatically reduce operating costs and downtime, enhance performance, and create opportunities for increased revenue.

Companies spend a considerable amount of time researching software tools and vendors. Dataquest/Gartner indicates that a company's time spent researching and evaluating solutions, time spent deciding upon which solution to use, and time spent waiting for the solution to be implemented, should be considered as part of the total cost.

Once a company purchases a tool, it still has to be integrated into the enterprise environment. Just getting a piece of software out of the box and loading it onto a system is only the beginning.

There are many interfaces and touch points that must be addressed in order to make it as seamless as possible. But implementing the tool is not enough to enable the tool to fulfill its promise.

The next step is to make sure that all of the people and business processes associated with the tool are linked with the rest of the company's business processes and service delivery. Unfortunately, this is not the case with most companies and not even with most service providers. Gartner research findings demonstrate that most companies do not spend enough time and energy on integrating tools.

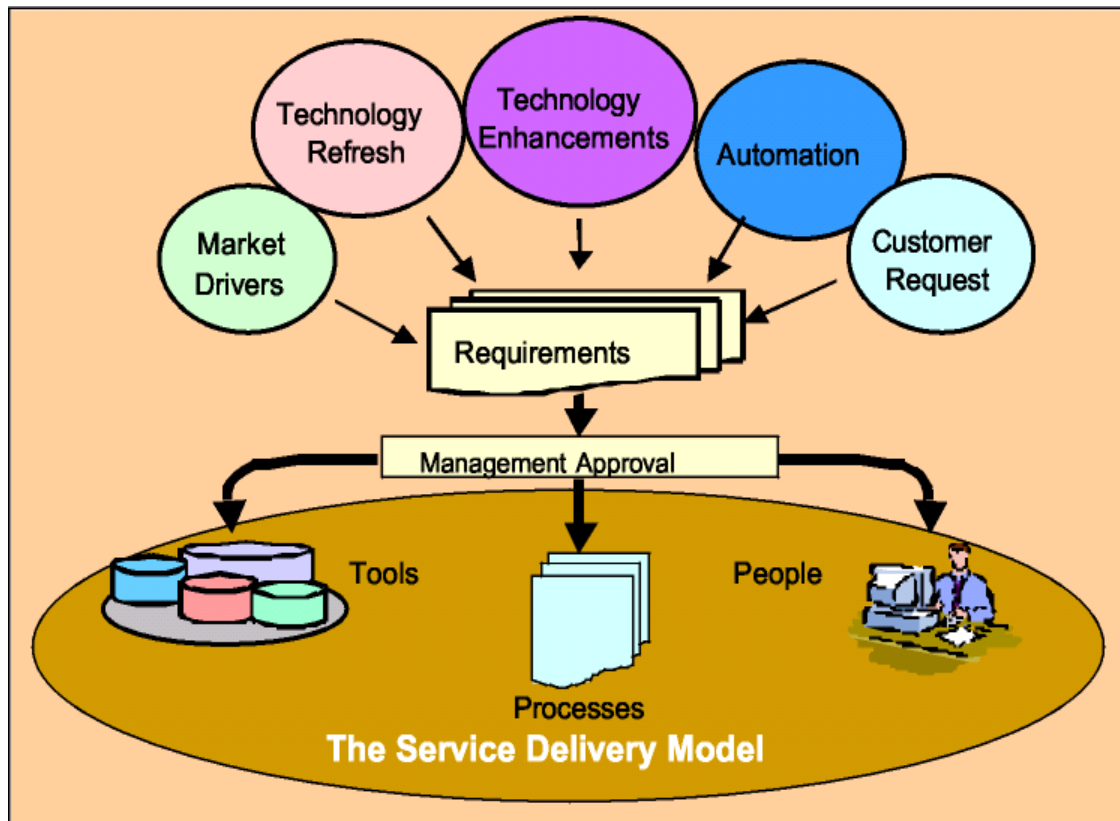
Unless the service delivery model is truly integrated, a service provider will have to enter data into one system and then transfer it into another. With an integrated service delivery model, once the data is entered into one system, all of the systems and tools are automatically updated. This alone may swing the decision to the integrated suite. However, integration is very complicated.

It is imperative that a company examine the business model behind a solution before it signs a contract.

### ***Portrait of an Integrated ERP Environment***

End-users in twenty-one companies across industries and in government responded to a Dataquest survey in March 2001. The respondents were asked: "Over the past two years, to what degree has the complexity of your business challenges changed on a scale of 1-7, with 1 being no change and 7 being significantly more complex. Nearly half of the respondents indicated that the complexity of their business challenges is increasing significantly and over 85 percent indicate a moderate-to-significant change in complexity.

An integrated ERP combines individual services to deliver a utility or service – similar to telephone dial tone or electricity that is always available at the level needed by the end-user organizations.



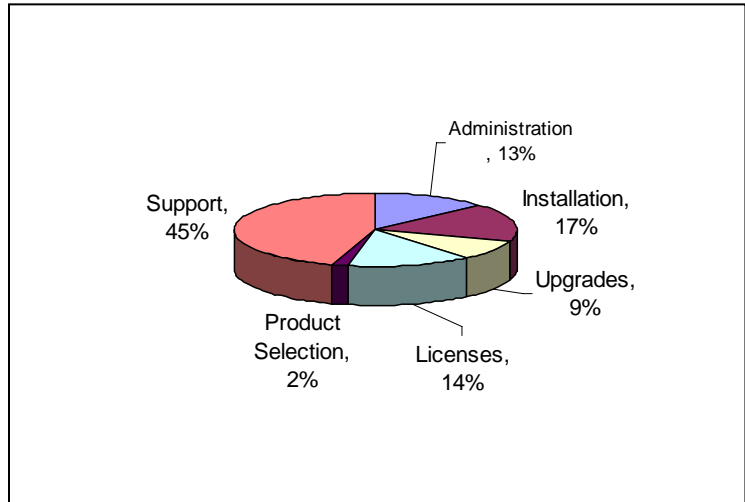
Among the issues that are driving changes to IT service models, Dataquest/Gartner studies indicate the following are prominent factors:

- (1) business is moving at an incredible pace, and rapid advancements in technology are creating a demand for speed and agility that will make companies more competitive and profitable;
- (2) the move and culture shift toward partnering brings complex solutions to clients easier and faster than ever before, and this is driving changes in ERP environments;
- (3) higher sense of urgency and improved management are accommodated by new tools; and
- (4) the need for easier access to services on the Web

An investment in IT does not necessarily buy a desired result. A software tool is not the solution. Tools simply support a business function. Tools are one component of service delivery. An integrated solution includes people and processes with the tools. Without an integrated solution, the power of new technology can only be diminished.

## Shadow Costs

A best-of-breed solution allows its users to access the tool suite. That suite will include best-of-breed tools in specific areas. The firm develops templates that allow it to deliver a standard model to all its clients. By using standardized templates, a BoB has the foundation to provide modifications that address specific client requirements. Although the services are tailored to each specific customer, this structured environment is proven and predictable, thus presenting a much higher probability in meeting the end-users requirements.



Generally, the purchase cost of tools is fairly low. The real expense comes with installing, deploying, maintaining, supporting and upgrading the tools – all items that dramatically affect the bottom line. In fact, Dataquest/Gartner studies show that these “indirect” costs comprise 86% of total cost of ownership (TCO).

Organizations of all sizes are faced with an increasing need to reduce their TCO. As the illustration shows, the largest factor in costs is ongoing support.

## The Processes

Beyond implementation and maintenance costs, the deeper issue is the business processes that make the tools work together. Unless a service provider has its business processes integrated into the system, a customer will not realize maximum savings. It will gain only the advantage of being part of a large cooperative of buyers. Additionally, it can easily become more costly for a company’s end-users to obtain the services and goods they need than it was prior to outsourcing.

Maintaining data integrity is a critical factor. In addition, the installation of a new tool, or changes made to an existing tool, can have a substantial impact on the rest of the operation. A company may find itself with a situation, for example, where a group of employees can’t log in Monday morning because the help desk staff forgot that there was a special configuration for that one department when they made a server change during Sunday afternoon’s outage.

When something goes wrong, companies need to look at every aspect and recover systems as expediently as possible. To manage a desktop, for example, applications, server, security, network, and other elements need to be brought together. That is a fully integrated set of services that a service provider can provide.

### Proactive vs. Reactive

Instead of a problem being buried in a system that requires an administrator to log in and check to see if there is a problem, the systems within an integrated approach notify each other and send out alerts. The service provider with an integrated service delivery model can then anticipate the problems and head them off, rather than waiting for trouble tickets to arrive. With consolidated data and regular reports, systems and end-user issues can be identified and addressed to head off problems. Issues such as applications training to reduce support calls or early warnings that network performance is at risk are much more cost effective to resolve proactively.

### Human-to-System Interface

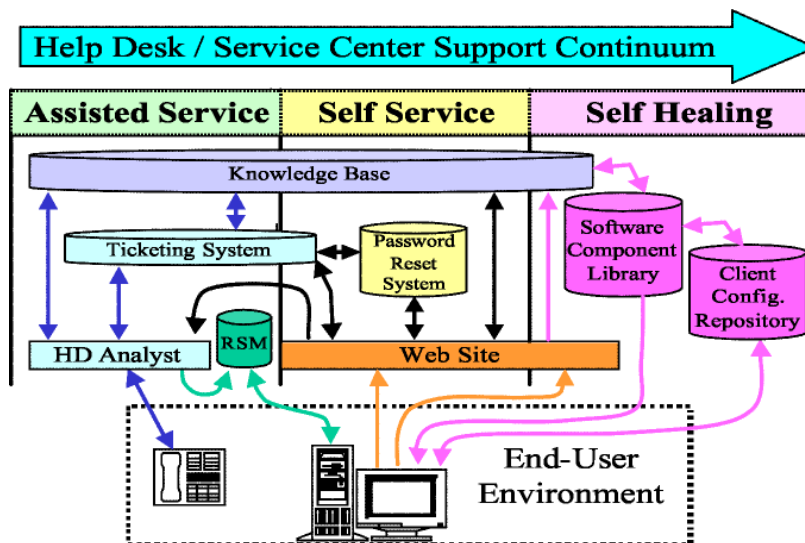
The number of applications and systems a person has to touch in order to accomplish a task or retrieve information is another cost factor that typically is overlooked by most organizations. If a company invests in seven discrete tools for its help desk analysts to use, those analysts have to interface with seven different systems. All day long, they have to toggle between the different tools, bring up this program and close that program, over and over again.

The best approach to maximize use, benefit, and productivity is to minimize the number of human-to-computer interfaces. An analyst or an end-user should not have to touch more than three different tools on a typical call.

The service provider that has integrated all of the tools at the system level has taken steps to avoid multiple human interfaces. An integrated toolset minimizes the amount of information that must be entered into the system for each request, thus maximizing effectiveness and timeliness of services.

### Arrows Are Expensive

An integrated solution will improve both service performance and total cost of ownership. “How can we reduce IT costs?” is a common question in organizations. But an IT tool



must deliver efficiency, so the more accurate question is: “How much does it cost to run this tool?”

The answer is represented in the arrows in the upcoming illustration. The arrows represent integration and interfaces. The greater number of arrows indicates more complex and expensive processes required for tool integration. Effective system interfaces are very complex, time consuming, and expensive unless a company uses a service provider with an integrated solution.

A better way to achieve faster, more efficient service at a predictable cost is to rely on a service provider’s experience and tools. Then every time there is a tool change or addition, the service provider bears the cost and responsibility. The client simply buys a service from the service provider based on its toolset. This is similar to telephone and electricity service. How much does someone care about how the electricity is provided or how data and voice traffic travels over a network – people simply want services that are reliable seven days a week.

### **Predictability**

Companies today are faced with the challenge of ensuring high performance and, at the same time, predictable service costs. With a service provider’s fully integrated set of services, a company will gain a predictable cost to maintain an environment per user/per month at certain service level agreements (SLAs).

More importantly, a single-source service provider with an integrated service delivery model is a single point of accountability. This cannot occur when a company is outsourcing to multiple service providers.

### **ERP suites feature substantial best-of-breed functionality, especially in performance management and the financial value chain. But BOB vs. ERP purchasing decisions remain complex.**

At first glance, United Asset Coverage, a \$30 million-a-year provider of telecommunications maintenance services, doesn't look like an organization that would be interested in the offerings of large enterprise resource planning (ERP) software vendors. When the fast-growing Naperville, Ill.-based company needed a new financial system last year, its most pivotal requirement was contract management functionality -- a quintessentially

best-of-breed (BOB) capability. Yet the search for that feature led United Asset to Oracle. "We're probably not the most likely candidate to seek out an Oracle solution," says CFO Mario Christopher. "We sought out a key component, contract management, and we anticipate that we will soon be at a size where we will leverage Oracle's full suite in a big way."

Manulife Financial Corp., the \$10.5 billion-a-year financial services giant, might seem a more typical ERP customer. Yet when the Toronto-based company chose to upgrade its

Lawson Financials enterprise suite to Lawson's Series 8 in February 2002, it did so, in part, because of the ease with which some BOB applications can be knitted into that system.

### ***What's going on here?***

ERP vendors are working hard to lift a page -- or several pages -- from their BOB competition's playbook. Some of their marketing efforts sound increasingly like those of BOB vendors, and their products are encroaching on traditional BOB functionality. But the shift is a cagey strategic move rather than a reinvention. ERP executives still chant their mantra of "seamless integration" and remain as vigilant as ever in pointing out the limitations that they say plague the best-of-breed approach.

What's more, ERP offerings have evolved significantly in the past 12 months. Development has been most pronounced in interenterprise collaboration functionality. And through new performance management features, ERP vendors' latest offerings address two issues that are high on CFOs' list of concerns: Sarbanes-Oxley compliance and the weak economy.

### **'Best of Suite'**

Manulife Financial had compelling reasons for its decision to take the enterprise software route, says Lynda Sullivan, vice president of financial systems and processes. The Lawson system meets Manulife's cash-processing needs, and it can handle the internal and external financial and expense management reporting requirements of a global financial services company. The system's out-of-the-box functionality, which offered an opportunity to achieve early benefits during the implementation process, was attractive. And the Lawson suite is flexible enough to handle a large volume of transactions and integrate with applications Manulife expects to add in the future, Sullivan reports.

Those benefits reflect most of the traditional areas of differentiation that enterprise software vendors emphasize in the ERP vs. BOB debate. But another key factor in Manulife's decision, according to Sullivan, was Lawson's alliance with BOB vendor Hyperion Solutions Corp. And that's a distinctly nontraditional ERP selling point.

Lawson is not alone in playing both sides of the ease-of-integration argument. SAP, for example, would not dissuade users of its R/3 financial software from using a customer relationship management (CRM) application from a best-of-breed vendor, according to Michael Park, vice president of strategy and innovation in SAP's New York City offices.

"If they've already made a multiple-million-dollar investment in that system, we certainly don't want them to rip it out and put in our system," Park says. "We can say, 'You can build the integration points between your CRM point solution and the SAP solution, and we can help you manage that.' " Of course, SAP's appreciation for best-of-breed ROI is limited. "When you're tired of managing those interfaces," Park says, "understand that we have the capability -- literally at the click of the switch -- to provide the same or better capability in a seamless fashion."

## **Integrated ERP Suites vs. BoB**

Brad Benson, senior vice president of product development with Lawson Software in St. Paul, Minn., echoes other ERP executives' messages when he lists the reasons companies choose enterprise systems over BOB: easier integration, less data replication, better security and support, and a simpler user interface.

Steve Miranda, Oracle Corp.'s vice president of development, says that no amount of "expensive integration" -- and he encourages CFOs to keep in mind the total cost of BOB solutions -- can "provide truly real-time analytical information."

SAP refers to its integration strategy as "best of suites." The company intends to compete with leading best-of-breed brands in their own territory by promoting what Park describes as an "integrated-by-design" solution.

### **What a CFO Wants**

By emphasizing integration and real-time access to business information, enterprise software providers hope to counter the success of best-of-breed performance management solutions. And ERP vendors are gaining on their BOB competition in that arena. In a recent ranking of performance management solutions by IT research and advisory services firm Meta Group in Stamford, Conn., offerings from best-of-breed vendor Hyperion and enterprise software provider PeopleSoft placed first and second, respectively. Although SAP and best-of-breed provider Cognos were not included in the evaluation, John Van Decker, Meta Group's senior program director, application delivery strategies, says he would add those solutions to the top of the list as well. Other large enterprise vendors, including Oracle, J.D. Edwards and Lawson, are increasingly focusing on performance management.

That strategy speaks directly to the biggest issues CFOs face this year. Coping with the struggling economy demands more agile forecasting capabilities, which in turn require quicker, more accurate performance management systems. To comply with Sarbanes-Oxley and its rules on disclosure, internal controls documentation and financial statement certifications, companies need fast access to financial and business information -- a key component of what performance management technology delivers.

When asked to identify CFOs' most pressing needs this year, PeopleSoft's vice president of product marketing Susan Foley Kane sounds as if she's leafing through the new law. She ticks off Section 404 (documentation, reporting and attestation of internal controls); Section 409 (real-time disclosure of material changes); financial statement certification; and the tighter deadline for quarterly reporting. PeopleSoft's Investor Portal and CFO Portal products offer compliance support, as do specific Lawson and Oracle solutions.

### ***Enabling the Financial Value Chain***

C. Cristian Wulf, a Seattle-based partner in Accenture's finance and performance management service line, believes that many companies have yet to fully realize the value of their ERP installations, particularly in reporting and information delivery. "The need for improved clarity, accuracy, timeliness and transparency in all aspects of enterprise operations is prompting CFOs to take a long look at financial policy, process and -- yes -- the related technology improvements," he observes.

But Bob Rugare, vice president of technology consulting for Cap Gemini Ernst & Young in Atlanta, believes the majority of ERP users have already extracted as much value as possible from their systems. "The next logical step is to extend that out to trading partners," he notes. "The aggressive movers in that space are further lowering their costs and conducting quicker transactions, which is making the business flow better."

Van Decker calls that terrain the financial value chain. He says that, with the exception of performance management, functionality related to the financial value chain is the primary focus of innovation for enterprise software vendors and their customers. When executed effectively, that functionality helps corporate finance maintain discipline and consistency and boost visibility. "With CRM and supply chain solutions there are corresponding financial management processes that need to be dispersed appropriately to where the transactions occur within the organization," Van Decker says. "Collections, for example, has typically been conducted by a couple of folks in the back office. I think an appropriate way to handle collections is to have those folks integrate the sales force into the collections process. That way, you can have visibility into payment history from your CRM solution."

Oracle offers a way to do just that with its new revenue and receivables function. At SAP, Park talks about "extending the footprint of an ERP solution" across the organization and beyond it to customers, partners and suppliers. Such extensions of ERP functionality are "probably the hottest value drivers of all the IT implementations" in recent months, says Rugare.

The growing interest in financial value chain solutions translates to a greater focus on portals. In basic terms, portal technology enables a company to give different constituencies (e.g. customers, suppliers) access to specific sets of corporate information. A portal provides single-sign-on access to systems and data at defined security levels. Web services, such as IBM's WebSphere, enable the collaboration. It doesn't matter, for example, if a supplier's computer runs on a different platform from that used by a buyer's system, so long as both companies conform to a Web services standard. To function effectively, a portal needs the support of secure, accurate, user-friendly financial processes. "From a financial perspective," says Rugare, "that includes all of the order-to-cash subprocesses."

Non-enterprise software vendors took the lead in designing portal products that helped extend ERP systems. But Oracle, SAP and PeopleSoft have all unveiled new or updated portal products in the past 2-3 years. These ERP vendors, together with systems

integrators like Cap Gemini Delinea, Ernst & Young, recognize the value of customizing their offerings as much as possible to reduce implementation time. "If they want a portal to, say, front-end their finance function," Rugare says, "I can get them up and running quicker than they can do on their own or than they can do by going with a technology vendor [exclusively], because I have an end-to-end solution for that particular suite."

SAP has developed various sets of financial value chain capabilities to address industry-specific needs. Instead of selling a generic CRM solution, for example, the company can provide a "trade promotion management" offering tailored to a specific industry, such as consumer packaged goods. "I think you're going to see more of the software industry moving to integrated business scenarios," Park says. "That addresses two of the most important factors driving software decisions today: How do we get more for less? And how do we take advantage of the dollars we've already invested?"

## **Conclusion**

In the history of software, few debates are more enduring than the perennial question of buying an integrated application suite vs. taking a best-of-breed approach. Far from being a settled matter, the discourse if anything has become more intense in the last year or two. Large enterprise software vendors such as [Oracle](#) and [SAP](#), America have announced additional modules and capabilities designed to round out their core enterprise resource planning (ERP) functionality to meet their client's every need.

On the other hand, current economic conditions are driving ERP purchasers of all sizes to focus on implementing more discrete application components for a quicker return on investment. Many corporate financial officers are less likely to allocate funding for big-bang software projects with so many ERP modules still sitting unused on the shelf. Also, the new extensible markup language (XML) and other technologies that collectively comprise Web services promise to ease integration pain, if not today then in the very near future.

The integrated strategy was especially popular in the late 1990s, when executives found it much easier to put their hands on the money needed for such "big-bang" rollouts. With the entire enterprise standardized on technology from one vendor, efficiency would skyrocket, costs would decrease, and headcount could be reduced. At least, that was the theory.

However, many of those massive implementations stalled after the basic functionality was put in, leaving companies disillusioned and suffering the consequences of paying for unused licenses and functionality. Many executives vowed to concentrate on shorter implementation cycles with the promise of faster payback.

## **Integration Points**

Still, there is much to recommend the integrated solution approach. Going with one vendor greatly reduces complexity, in terms of both technology and human interaction. There is meaning behind the saying "One throat to choke." Using an integrated suite is

## **Integrated ERP Suites vs. BoB**

arguably less costly than taking a best of breed approach that can require an enormous effort to integrate the disparate components as well as legacy systems. Volume improves pricing. The more licenses and modules you purchase from a single vendor, the more attractive costs are likely to be.

Mid-market utilities find integrated solutions particularly compelling, according to Scott Rich, Vice President of Marketing for Lilly Software Inc., an enterprise software vendor in Hampton, N.H. "The middle tier does not have the funds or the IT staff to do the integration of multiple applications," says Rich. But while cost starts off as the top issue for utilities considering going with a single vendor, "then they realize how beneficial it is to have a fully integrated suite of applications where all the departments are sharing the same data and collaborating."

The integrated suite vendors are now searching for rapid implementation methodologies and phased implementation plans. This shift is an attempt on the part of vendors to counter the perception that integrated suites take far too long to implement and realize return. Even where companies elect to purchase the entire suite, practicality dictates that they roll it out one module at a time. But between the time you start the implementation and you get around to installing every last module, much has changed in your world.

So, what's the best approach? Take your pick!!

### ***Selected Bibliography***

Davenport, T.H. *Process Innovation: Reengineering Work through Information Technology*, Harvard Business School Press, Boston, Massachusetts, 1993.

Gable, G., and Stewart, G. „SAP R/3 Implementation Issues for Small to Medium Enterprises,“ *Proceedings of the Fifth Americas Conference on Information Systems*, Milwaukee, Wisconsin, 1999.

Guha, S., et al. „Business Process Change and Organizational Performance: Exploring an Antecedent Model,“ *Journal of Management Information Systems (14:1)*, 1997, pp. 119-154.

Hammer, M., and Champy, J. *Reengineering the Corporation*, Harper Collins Publisher, New York, 1993.

Hecht, B. „Managing Resources - Choose the right ERP software,“ *Plugin Datamation*, 1997.

James, David and Seibert, Graham,, *Oracle Financials Handbook: Planning and Implementing Oracle Financial Applications Suite*, 1999.

Laudon; K.C., and Laudon, J.P. *Management Information Systems – New Approaches to Organization & Technology*, Prentice Hall, 5<sup>th</sup> Ed. London, 1998.

Scott, J.E. „The FoxMeyer Drugs' Bankruptcy: Was it a Failure of ERP?,“ *Proceedings of the Fifth Americas Conference on Information Systems*, Milwaukee, Wisconsin, 1999.

Stonich, Paul,, *Implementing Strategy: Making Strategy Happen*, Management Analysis Center, Inc., 1982