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**AMR RESEARCH REPORT**

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**Maximizing the Impact: A Strategic Approach  
to ERP Selection for SME Manufacturers**

*by Dave Caruso*

In today's wired world, ERP is the very infrastructure of how your business operates. It is also the platform for future expansion into the global business environment. For this reason, a fresh approach to selecting ERP systems is warranted. This new approach must recognize that it's not a high percentage match of features and functions to your existing business that will help your company succeed—it's knowing what aligns your system to the true basis of competition in your industry. This Report provides insight to how leading companies evaluate business applications.

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# Maximizing the Impact: A Strategic Approach to ERP Selection for SME Manufacturers

by *Dave Caruso*

**The Bottom Line:** To maximize the impact of a new ERP system, buyers must apply a new context to the process.

There are many reasons that can compel a corporation to embark on a business system replacement, including the need to replace obsolete hardware, have better access to data, and reduce costs. However, more and more companies are compelled to invest in technology, specifically ERP systems, to provide enhanced executive visibility, improve customer and supplier interaction, and create a competitive cost structure.

In today's wired world, ERP is the very infrastructure of how your business operates. It is also the platform for future expansion into the global business environment. For this reason, a fresh approach to selecting ERP systems is warranted. This new approach must recognize that it's not a high percentage match of features and functions to your existing business that will help your company succeed—it's knowing what aligns your system to the true basis of competition in your industry. This Report provides insight to how leading companies evaluate business applications.

## Why a new approach?

AMR Research has studied the ERP market since its inception in the late 1980s, during which time we have identified numerous business cycles. In our discussions with users, vendors, and consultants, we have found that the ERP systems market is entering a new phase that will have profound implications for application design and deployments:

- Newer ERP systems more effectively support the needs of global operations and the realities of enterprise-wide deployments.
- Business Process Management (BPM) capabilities will become a core requirement in the next three years.
- In most cases, the standard functionality available in ERP systems designed for the SME manufacturers includes very powerful applications in the supply chain, Product Lifecycle Management (PLM), and Customer Relationship Management (CRM) areas. These applications were previously available only as add-on capabilities targeted primarily at the large company markets.
- New technologies simplify the integration to external trading partners and desktop applications, and the integration of real-time business analytics speeds the time to value of the complete application required to manage the business in a world where business processes and external requirements from customers change daily.

## **Your next ERP system must reflect the personality and go-to-market posture of the company**

Developing the business case for purchasing a system must support and enhance the company's business strategy. First, an understanding of the company's strategy, the competitive landscape in which it sells its product, and its e-business initiatives is essential in the planning phase. This, for most companies, is the domain of the executive staff members and often the CEO. While this may seem obvious, far too many selections degenerate into bottom-up feature/function selections, making competitive gains far too difficult to achieve.

Corporations are at a critical juncture with their enterprise-wide systems. The rules for the identification of your ERP system have shifted from one governed by IT policy to one driven by business initiatives. These business initiatives are often not clearly stated as software features but rather as overarching business capabilities. For Small and Midsize Enterprise (SME) manufacturers, dealing with high-growth rates and satisfying their most important customers demands entirely new ways of doing business. As a result, the next generation of systems must enable the following:

- Support centralized and decentralized management structures
- Provide corporate-wide visibility to leverage global corporate resources, buying power, and intelligence
- Provide more employees with real-time monitoring and response capabilities
- Assist managers with active planning and decision-making applications that are guided by business goals
- Provide flexibility to support mergers, acquisitions, and divestitures

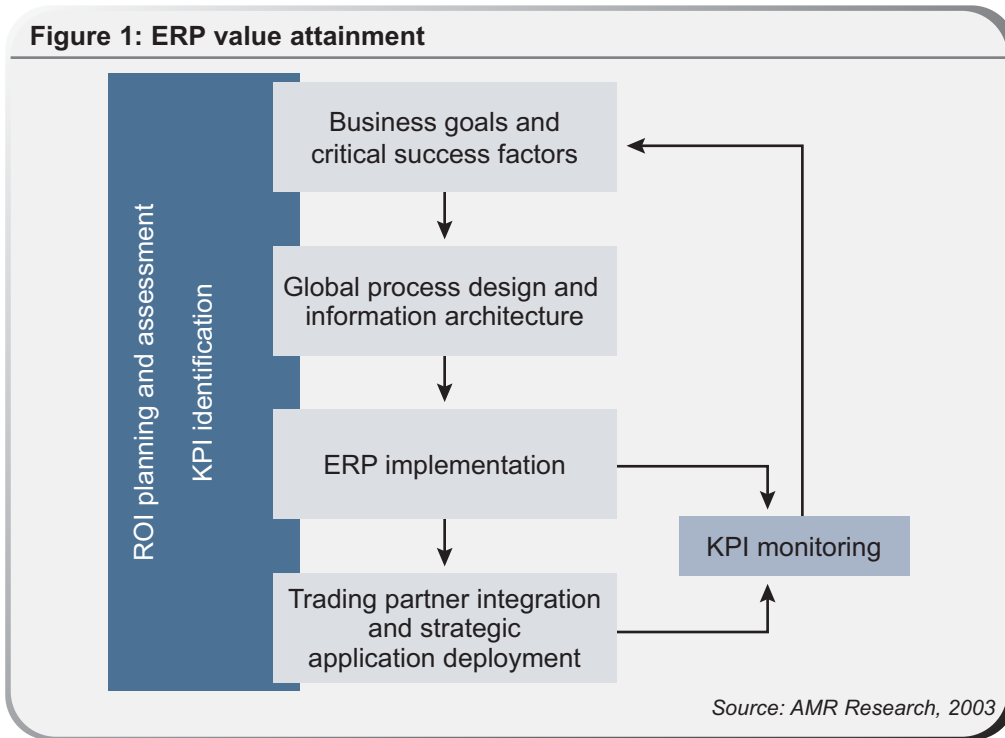
Given these somewhat more abstract system requirements, the traditional feature matching selection process doesn't get the job done right. Companies striving for long-term system investments must use a top-down framework to achieve the strategic benefits sought.

### **What is the strategic framework?**

AMR Research has identified the main high-level activities that frame the problem and lay the groundwork for an effective ERP selection and implementation process:

- Establish the true basis of competition for your industry.
- Determine which business processes enable your competitive position within the basis of competition—which processes, when operated efficiently, will create a more competitive cost structure?
- Identify which Key Performance Indicators (KPIs) determine efficient operation of those critical business processes.
- Assess which vendors and products provide the most compelling fit and ownership cost for the critical drivers of your company's planned use of the applications.

The main components of the selection process fit nicely into the ERP value attainment process in use at many firms today (see Figure 1).



## Define business goals and future critical success factors

High-powered ERP implementations transcend corporate boundaries. Indeed, industry leaders have a keen sense of what the true basis of competition is within their respective industries. For example, despite the need for low-cost manufacturing, excelling at competing in your sales channels, particularly third-party distribution channels, will become a necessity, not a luxury in many product-based manufacturing industries. As well, strengthening feedback loops from customer contact centers into R&D and embracing customers as active participants in collaboration may very well be your competitive edge in an efficient marketplace.

The basis of competition within your industry determines how to weight your most critical business processes. Project managers and sponsors must identify the company's levers for success. These levers vary by industry and maturity of the supply chain in an individual industry (see Table 1).

**Table 1: Competitive factors**

<b>Industry</b>	<b>Basis of Competition</b>
Retail and Consumer Packaged Goods	Low supply chain costs
Pharmaceuticals	Innovation and new product introduction
High-Technology	Innovation
Automotive	Low-cost production/lean operations

*Source: AMR Research, 2003*

## Business processes should be your critical focus

Managers must next break down these strategies into the underlying processes that lead to improvement and success. Converting these Critical Success Factors (CSFs) into processes helps monitor and advance the detail process. In many cases, entirely new processes must be developed to move to the next level of corporate performance or address industry-driven change.

Our review of successful projects reveals that attaining substantial ROI is achieved by improving existing processes and innovating new processes that speed delivery, reduce overhead, and create new market opportunities. Many of these business processes will be new to organizations as they grapple with supply chain and e-business-driven changes that businesses must make. To integrate them successfully, managers must link business processes to strategic business drivers (see Table 2).

**Table 2: Business processes impact corporate goals**

Corporate Improvement Goals	Business Processes That Influence Competitive Advantage
Return on Assets	Manufacturing flow Outsourcing
Product Profitability	Product design and introduction Service information feedback Sourcing and procurement
Sales and Profitability by Channel	Web-based marketing and sales Creation of third-party channels
Profitability by Customer	Upsell and cross-sell innovation One-to-one marketing
Margin by Product/Channel	Product development/target costing Pricing Channel management
Improved Customer Satisfaction	Manufacturing quality Service and call handling Distribution and fulfillment
Time to Market / Product and Service Innovation	New product introduction Project-based collaboration Channel management
Incremental Sales by Customer	Customer analysis Personalized marketing and service Opportunity management Aftermarket services

Source: AMR Research, 2003

## Meaningful KPIs drive successful implementations

Everyone knows that the best way to improve performance is to measure it. The trick is to establish the right measures that drive the correct behavior and process performance. Three critical aspects must be considered when designing metrics, and oftentimes you will need all three to establish breakthrough performance across the lifecycle of the process:

- **Adoption**—How many users and trading partners are actually participating in the new process or use the applications? What is the target population?
- **Process performance**—Is the business process operating at a higher level than before? Is it executing faster, with less overhead or less cost?
- **Return on investment**—After the process has started to perform better, is there a tangible return, such as less inventory or head count? Alternatively, are you experiencing higher order rates or better customer penetration?

During the information-gathering phase, assess the potential and achievable goals for the process. Knowing the potential of a process and the capability of the industry leaders will focus process designers on actual stretch goals, not mere process tweaking. Process participants will soon recognize and ignore goals that are unrealistic. Plan for education about the goals and the linkage to the company CSF.

Determine the opportunity by identifying the delta between the current state of the business and the company vision, including its e-business initiatives. Using current CSFs with additional benchmark data and KPIs will help sell the need for purchasing a new system.

## At the end of the day, it's still all about ROI

*Return on investment* is the term used to describe the financial benefit accrued from the monies spent on ERP and business technologies. While clear financial measures exist to assess ROI, there are also additional benefits of revenue growth and competitive advantage that are very important but harder to measure. For midmarket companies, especially in high-growth markets, a key ROI measurement may also be the rapid attainment of a specific competitive advantage, which is so necessary in today's fast-moving markets.

An equally important step is to articulate the timing and relationships of the benefit accrual. Many companies report difficulty in maintaining executive interest when the executives expect instant gratification. Benefits may need to be measured over many years, not just over a short duration following the implementation. This does not mean that implementations will fail to deliver short-term benefit, but rather that expectations must be set correctly to avoid losing the support of executive sponsors.

## **What to look for in ERP systems, vendors, and service providers**

The concept of an integrated system for order management, planning, inventory management, manufacturing, and financials is the mainstay component of global systems in big corporations. Now the SME market can capitalize on those same capabilities as they move into a global supply chain. Today's ERP market is divided much more sharply between leading ERP vendors with advanced architectures that support global requirements and SME vendors that focus on companies with mostly single-site needs. The following sections cover items to consider in your SME ERP selection process.

### **The application product**

Besides the expected inventory, manufacturing, and financial applications, many of the current ERP systems available to SME firms include numerous strategic applications that create and optimize powerful capabilities that address critical new business processes. In addition, many advanced architectures will allow corporations to provide cross-divisional or corporate-wide leverage across many critical business processes. Segments that may make a difference in your ERP plans include the following:

- Sourcing and procurement and supplier portals
- Customer portals, order management, and customer fulfillment
- Budgeting and financial consolidation
- Supply chain management
- Business analytics and Enterprise Performance Management (EPM)
- Human Capital Management (HCM) and employee portals
- Vertical industry-specific business process capabilities, such as EDI, lot traceability, and RFID

### **The underlying technology**

SME manufacturers are constantly looking for ways to increase efficiency and take advantage of new technologies, as long as the implementation delivers business benefit. Unlike the case in larger organizations, the latest technology buzzwords do not always tempt midsize organizations. They do not look to implement technology for technology's sake, but rather to support the business requirements better. Typically, technical resources are scarce, so manufacturers are concerned with the cost-benefit ratio associated with the technology.

Consider the business value and efficiency of the underlying technologies. Key considerations for most SME manufacturers include the following:

- Integration to desktop applications
- Customizable portal frameworks to develop their own performance dashboards
- Integration toolkits that enable quick connections to trading partners
- Workflow and BPM tools
- Support for the custom configuration of applications to address new business processes
- A technology base that adheres to industry standards designed to simplify and support lower overall IT ownership costs
- Incremental release upgrade support by application component, business unit, and geography

### **Software vendors, VARs, and service providers**

Users should look for the vendor or partner to provide all of the software needed, including third-party partner products, implementation services, and full local support/training capabilities. A full-service partnership is critical for success in the midmarket. As a result, most midmarket vendors have developed both an indirect Value-Added Resellers (VARs) and a direct channel for larger, more strategic, or global accounts. In addition, many vendors use their VAR channel to not only handle local support issues, but also to develop vertical functionality, which helps to round out the product to meet very specific industry requirements.

The financial viability and stability of the vendors is critical to the middle market—smart users recognize that they are buying into a long-term partnership with their application vendors. Overall, midmarket manufacturers are looking for a vendor to provide an end-to-end product, but they also want the vendor to be a partner that provides ongoing product assistance as well as business/industry expertise and knowledge. Vendor and VAR considerations would include the following:

- A strong track record of successful implementations
- High-quality user references
- Implementation experience that aligns with your vertical industry and company size—It is also important to assess how much local support will be important to your company and success
- Long-term financial viability of both the vendor and its VAR partners
- A history of keeping up with incremental release upgrade support by application component, business unit, and geography advances in their product deliveries

## **Key steps in your ERP selection process**

For SME manufacturers, a pragmatic approach to ERP selection incorporates seven key steps.

### **1. Organize selection team and responsibilities**

The software selection process should be coordinated and driven by an empowered team drawn from corporate management, operations, and IT. It is imperative that projects of this magnitude have the insight that is only available from those at the top levels of management who are ultimately responsible for the success of the business. Remember, for many SME manufacturers, the need for a new ERP system often derives from expanded requirements from your most important customers or an evolving supply chain within the industry. The critical functionality required to fulfill your vision is likely not part of your existing processes or systems. Recognizing this, experience indicates that business operations managers, and not IT, drive successful projects.

### **2. Determine the selection project timeline**

Another responsibility at the outset of the project is to establish the proposed schedule for the application decision, implementation priorities (site and application), and implementation timelines. The amount of time required by most companies to select a preferred vendor is typically 12 to 16 weeks after the initiation of the selection process. Long, drawn-out selections have never proven to be any better than highly focused, short cycle efforts.

### **3. Establish the project scope**

The team identifies and agrees upon the nature of the project, the business processes affected, the current IT situation as it relates to barriers to flow and access to information and the expected number of users and plants that will implement and use the new system. In addition, the team should produce a list of the desired results from the project, and how those results will improve the business. The team also identifies the business issues and critical success factors driving the software selection. The next step is to define the scope by identifying the current and new processes that the software will be expected to support.

#### **4. Define the system's requirements**

The team will need to provide prospective vendors with a list of requirements to be supported by the new system. New system requirements are determined by focusing on the information needs that reduce overhead and speed critical business processes. When considering processes, it is necessary to view the needs of multiple departments simultaneously. Therefore, the project team must establish complete buy-in from all levels of the organization.

The final requirements document should cover the entire range of business processes in scope. It is important to give consideration to weighting the importance of business processes to achieving the company's competitive goals. Request that the vendors demonstrate the system with company-specific business process scripts.

#### **5. Develop business scenario demonstration scripts**

The software demonstration process is designed to help you understand what a vendor's software is capable of doing. It is best used to answer how the software improves your business and competitive improvement.

This is how questions are usually addressed through a demonstration scenario. Your approach to the development of the scenario will be related to your company's tolerance for risk and the time and resources you have available to develop the scenario, observe the demonstrations, and evaluate the results. Companies with low risk tolerance and high time and resource availability may choose to create a functional flow demonstration scenario. Such a scenario demonstrates the capabilities of the software across the entire business process, from product engineering through general ledger and cost accounting.

Companies with fewer resources can instead concentrate efforts on creating a critical processes demonstration scenario. With this technique, you will initially identify system needs that are crucial to the success of your organization, and then consider any requirements dictated by any new or reengineered business processes. Additionally, companies should identify those processes (which may be currently well served through standard or customized software) that you feel are unique to your company.

#### **6. Observe business process demonstrations**

By providing the vendor with a script of key business processes on which to base the demo, it is easier to compare how each business application will fit your business. Given the time and effort required by the vendor and the prospect to follow the scripted scenario approach, demonstrations should be limited to vendors, which have met your long-term partner and viability measures.

Allow time for vendor discovery. In preparing for the demonstrations, it is not uncommon for several of the vendor's sales support consultants to spend two weeks or more preparing for a scripted demo. This should also include several visits to your site for plant tours and consulting with key people in business operations to best understand the critical needs, challenges, and objectives of your business.

In addition, while it is important that vendors follow a script, you should allow them some latitude to offer alternative processes. Business changes at an amazing pace these days and software vendors and VARs are constantly working to understand the best practices of many industries and incorporate these ideas into their applications. Allow the vendor to demonstrate alternative features and functions that may be superior to those suggested in the original business process description.

Prospective buyers should provide the vendor at least four weeks to prepare for a detailed, scripted demo, and make sure that the vendor has adequate time to schedule the right people to give the best demo. Finally, make sure that what is selected is the best-fit product, not the best demo.

## **7. Select your product and partner**

Remember, selecting an ERP system should be focused on using technology to cut costs, increase efficiencies, and improve customer satisfaction. The critical competitive capabilities that your company needs are delivered through key business processes, not fancy transactions. Midmarket buyers and users of software, as in any other segment, expect a lot from software vendors. However, most are subject to budgetary and resource constraints. It is absolutely critical to understand the business requirements fully and consider more than just feature/functions, when evaluating new applications or contemplating an upgrade with an existing software vendor.

- Consider the TCO aspect of business applications. Users are shifting away from buying short-term products and instead searching for long-term relationships or partnerships with vendors. Therefore, the ongoing cost of upgrades and system maintenance needs to be a critical part of your evaluation.
- Be practical when considering a software purchase or upgrade. Look at technology as well as improved functionality and fit within your organization. Make sure that you invest in a system that can grow at the same rate as your organization. Align the business strategy with the IT strategy and develop a long-term plan for success.
- Vertical alignment is still key to the long-term success of an implementation. Look for integrated functionality that manages the critical business processes that make your company successful within its industry. As your business needs evolve, make sure that your vendor can address your changing requirements.
- Review the availability of industry-experienced implementation consultants and support personnel. The track record that the vendor or VAR has in your industry is an excellent predictor of the speed and success of your implementation.

## CLOSING COMMENTS

Today, most SME manufacturers are required to participate in the global supply chain by the giants of industry they serve. Driven by industry changes, many of the old business models and processes are no longer effective. As a result, the information systems that power these new processes must be replaced to be competitive. While it is absolutely critical to fully understand all of the business requirements for your next system selection, it is best to consider more than just feature/functions. Companies should strive for breakthrough performance by making those business processes define competition in your industry as the basis of your selection criteria.

## NOTES

AMR Research is a strategic advisory firm that provides business and technology executives with the critical analysis and practical advice needed to manage resources, mitigate risk, and increase business value. The company's industry-specific research initiatives focus on key trends, issues, and developments in Enterprise Management, Customer Relationship Management, Supply Chain Management, and other strategic business applications and enabling technologies that drive the market. AMR Research, founded in 1986, is headquartered in Boston with an office in Irvine and European headquarters in London. More information is available at [www.amrresearch.com](http://www.amrresearch.com).

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## ACRONYM LIST

Acronym	Definition
BPM	Business Process Management
CRM	Customer Relationship Management
CSF	Critical Success Factor
EDI	Electronic Data Interchange
EPM	Enterprise Performance Management
ERP	Enterprise Resource Planning
HCM	Human Capital Management
IT	Information Technology
KPI	Key Performance Indicator
PLM	Product Lifecycle Management
R&D	Research and Development
RFID	Radio Frequency Identification
ROI	Return on Investment
SME	Small and Midsize Enterprise
TCO	Total Cost of Ownership
VAR	Value-Added Reseller