

Enterprise Resource Planning: The promise and limits of ERP

Executive Summary

Enterprise resource planning (ERP) software systems can improve the coordination and efficiency of an organization's back-office operations. In this Information Edge, we will look at the business benefits that two organizations, Sharp Healthcare in San Diego and Roswell Park Cancer Institute in Buffalo, N.Y., are deriving from their ERP systems. ERP is a tool that can help an organization meet its business objectives, but is not a solution in and of itself. We'll examine why the jury is still out on the ultimate return on investment ERP can produce, and why ROI might best be maximized by linking ERP to medical management and front-office customer relationship management (CRM) systems.



First questions

As it considers an ERP strategy, a healthcare delivery organization should ask itself several questions about how it views resource planning and management from an enterprise-wide perspective, and the priority of these issues relative to other challenges. These questions include:

- To what degree is the organization experiencing problems related to the cost, quality or timely delivery of supplies?
- To what degree is the organization experiencing problems related to the matching of human resources to demand?
- To what degree does management have access to the information required to make informed decisions regarding cost and resource planning and management?
- Has the organization implemented other enterprise-wide solutions? If so, what stage of implementation are we in and what results are we seeing?
- Is there support from CEO, COO, CFO, CIO, vice president of human resources and the vice president responsible for materials management?
- To what degree is the organization experiencing problems in consolidating financial reporting?
- To what degree is the organization willing to undertake a complex review of its business processes with an eye toward changing them to fit the practices embodied in any selected ERP system?
- Has the organization adopted standards for data and systems, specifically database management systems?

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ERP data can target problems related to the utilization of resources—both human resources and materials.

Healthcare organizations can definitely benefit from the efficiencies an ERP system can generate, says Berkeley, Calif.-based independent healthcare consultant Peter Boland. “The thing to remember is that designing, installing and modifying an ERP program to meet an organization’s unique needs is a big deal,” he says. “A successful ERP implementation is not a CIO project. It requires a total organizational commitment.”

Advantages of ERP

ERP solutions help organizations redesign processes by integrating major areas of business such as finance, distribution, human resources and purchasing. ERP data can target problems related to resource utilization—both human resources and materials. Coupled with appropriate new business processes, an ERP system can yield substantial returns on investment and can help create a unified corporate culture, improve resource management, increase operational effectiveness, reduce costs and enhance customer service.

“In its truest sense, ERP is the discipline of integrating the organization’s business into a coherent and well-managed whole,” says Bill Weber, VP for ERP solutions at First Consulting Group. Traditional ERP software vendors first focused on the manufacturing industry, building modular software linking financial systems with systems for the shop floor. These products have been modified for healthcare, an industry with which the vendors were less familiar. Typically, current ERP systems are marketed toward financial (excluding billing and A/R), human resources and materials management applications.

ERP application software provides a crucial foundation to help organizations simplify, integrate and manage critical business functions in the areas of materials management, human resources and financials. According to Weber, ERP solutions are the fastest growing segment in the healthcare IT industry. The driving forces for ERP business solutions in healthcare include:

- Need to gain competitive advantage by improving organizational performance, service quality and efficiency while lowering costs
- Mergers and acquisitions
- Streamlining tasks
- Creating consolidated, centralized reporting
- Removing dependency on IS for reporting and processing

Specific benefits of ERP in healthcare include:

- Overall—Company-wide consolidation of some key management information, real-time processing and faster, more accurate reporting. These can lower operating costs and enable faster, better-informed executive decision making.
- Human Resources Management Systems (Payroll, Benefits)—Streamlined hiring process, integration of HR with payroll and benefits, increased workflow and employee access to online self-service benefits-management tools, online timekeeping. These can help reduce HR administrative costs.
- Materials Management (Inventory, Purchasing)—Centralized vendor and item master, reduced inventory, supply-chain management. The benefits of these features include greater economies of scale in purchasing and lower inventory costs.

- Finance (GL, AP, Budgets)—Enterprise-wide consolidated chart of accounts, facilitated financial analysis (trends), enhanced budgeting capabilities.
- Information Technology—Improved data management/warehousing solutions can better position an organization for growth and mergers/acquisitions, and increase IT productivity.

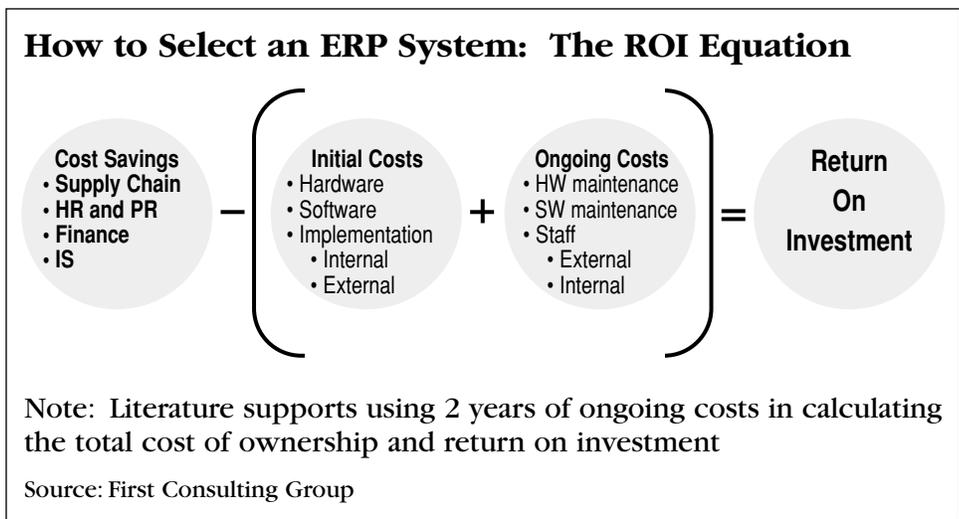
Limits of ERP

Healthcare providers should put ERP into perspective by understanding that commercially available solutions support only about half of the eight major resource-managing processes required by today’s IDNs—and none of the most resource-intensive processes such as care delivery. A true healthcare ERP solution will ultimately mean tightly integrating financial and clinical systems. This is a goal for most healthcare organizations, but one that current vendor solutions cannot yet reach.

Using ERP to rationalize internal business components is good as far as it goes, suggests Boland, but it’s not enough. He suggests putting ERP in a broader context that involves a more tightly focused emphasis serving the patients and payers who are its customers. “The idea of being more efficient isn’t going to capture people’s imaginations and get their commitment to changing business practices,” he says. “You need to put ERP in the context of customer-relationship management.”

CRM systems will show greatest return on investment only when linked to medical management. Before we analyze the broad strategic implications of such an approach, we will look at how two organizations are using ERP systems today to improve back-office operations.

An ERP system, coupled with appropriate new business processes, can yield substantial returns on investment and can help create a unified corporate culture, improve resource management, increase operational effectiveness, reduce costs, and enhance customer service.



Sharp vision

Sharp HealthCare, a San Diego regional healthcare-delivery system, includes five acute-care hospitals, one specialty women’s hospital, three medical groups, medical clinics, urgent-care centers, skilled-nursing facilities and a variety of other community health-education programs and related services.

Prior to its ERP installation, the Sharp materials management vendor master had 20,000 records, and issued 56,500 purchase orders each year. Accounts payable processed 219,000 invoices, 232,000 vouchers, and issued 158,000 checks per year. Human resources manages benefits for more than 10,000 employees.

As it expanded in the late 1980's and early 1990's, Sharp converted all its facilities to a common financial system. As a result, it did not have the burden of disparate legacy systems when it decided to install an ERP system.

"We put out an RFI in July 1999," says Ken Szymanski, Sharp's director of business systems. "It wasn't Y2K-related, as we had nearly finished our remediation. Our goal was to maintain common financial systems, and we knew we needed a system that would lay the groundwork so that we could move into e-commerce." Sharp also wanted tools that could get better information to managers faster. "Because of the challenges of working with our older systems, managers started building their own little databases, using tools like Excel spreadsheets with their direct reports' dates of employment," Szymanski says. "We wanted to get away from that."

Sharp chose the Lawson Enterprise Resource Planning system, which includes:

- General Financials,
- Accounts Payable,
- Materials Management, and
- Human Resources/Payroll applications.

"Before they installed the system, information was available only at a summary level," says Randy Lancaster, the FCG senior project manager. "With Lawson, everything is much more detailed. While this created more work for the accounts payable staff, it provided the tremendous advantage of making available much more information."

Sharp is just starting to derive benefits from the system. One example is in the area of Web requisitioning. "Before, we had terminals scattered throughout our facilities that connected to the materials management system," Szymanski says. "Now, they can order from any PC. Before, each facility manually turned requisitions into purchase orders. Now this process is automatic, creating efficiencies throughout the system."

In the next year, Sharp will go live with Managers' and Employees' Self-Service modules that will let managers look up information about their direct reports online and let employees edit their own information. In the next several months, Sharp will begin using Lawson's Analytic Suite, which will give financial analysts and accountants a more powerful tool for analyzing business trends.

Szymanski cites two major lessons learned so far in the ERP installation. "First, take a look at departmental procedures and standards (such as the Chart of Accounts) that need to be consolidated before going ahead with an ERP system. You'll save time and avoid trouble later. Second, understand that the system is so huge and has so many pieces that no one person is going to fully understand the whole thing. It will take a while to take advantage of the system's full potential."

Sharp Hospitals

- Sharp Memorial Hospitals
- Sharp Memorial Hospital
- Sharp Cabrillo Hospital
- Sharp Mesa Vista Hospital
- Sharp Mary Birch Hospital for Women
- Sharp Chula Vista Medical Center
- Sharp Coronado Hospital and Healthcare Center
- Grossmont Hospital

Sharp Medical Groups

- Sharp Rees-Stealy Medical Group
- Sharp Mission Park Medical Group
- Sharp Community Medical Group

Other Sharp Entities

- Corporate Office
- Sharp Health Plan
- Sharp Hospitals Foundation
- Grossmont Hospitals Foundation

Sharp By the Numbers

- Total beds for all facilities: 1,667
- Average daily census: 1,050
- FTEs: 10,500
- Payroll checks annually: 260,000
- W-2s issued in 1999: 13,500

New status, new needs

Roswell Park Cancer Institute was established in Buffalo, N.Y., in 1898 as the nation's first comprehensive cancer treatment, research and education facility, and is one of 34 National Cancer Institute-designated comprehensive cancer centers. Until 1999, it operated as a unit of the New York State Department of Health. That year, legislation changed its status to a public benefit corporation run by a board appointed by the governor and legislature. Both of the institute's operating companies, Health Research Inc., and Roswell Park Cancer Institute, are on the same campus, and together have 2,400 employees.

The change in status meant that the institute would take over back-office functions formerly handled by the state. To perform those functions, the institute installed the core components of an ERP system in January 2000. Those functions are general ledger, accounts payable, payroll, human resources and procurement.

The HR component has some complexity, says Roswell CIO JoAnne Ruh, because former state employees retained their civil service status and affiliations with one of five labor contracts after the transition. The Lawson system is proving to be flexible, Ruh says. "We run our employee telephone directory through the system, and the directory includes students and volunteers who are not in our payroll system. We were able to add tables to our directory to include those students and volunteers."

"We have utilized our ERP applications to achieve just-in-time inventory at each nurse station and clinic," Ruh says. "As inventory is relieved from supply and drug stations the information is transmitted to the ERP system to electronically notify our vendor to restock machines. Our vendor delivers stock twice a day for each machine, minimizing inventory levels."

Roswell Park has not tried to determine the system's ROI, in part because that was not the reason for its installation, and because benchmarking would be difficult, since historical operating cost data reside with the state and were rolled into the Health Department budget before 1999. Ruh also noted that the ERP system is largely separate from the institute's medical management systems. This year, Roswell Park is working on Web-enabling some of its HR functions with employee kiosks that will allow online benefit changes.

Broader questions

ERP systems in healthcare haven't been around long enough to clearly demonstrate return on investment. To show that ROI, Boland argues, "The front office and back office must be integrated. For ERP to have a payoff requires a hospital or IDN to redesign its business focus more clearly around the customer, in this case the patient and payer." This requires total organizational support in order to gain the support of all the stakeholders throughout the organization on whom any system implementation's fate depends. "It's not just a matter of merely automating and better coordinating disparate functions."

For massive software tools to have an impact on an organization's output—the care it delivers—they must be part of a broader focus on customer

A true healthcare ERP solution means moving toward the future integration of financial systems with clinical systems.

ERP SELECTION & PLANNING

The Top 10 Do's

1. Focus on objectives and benefits throughout the entire process
2. Meet regularly and communicate often
3. Discuss implementation at very first meeting
4. Establish vendor access early
5. Be tough, but fair, with the vendors
6. Be flexible
7. Negotiate early
8. Use tools consistently
9. Address all issues as soon as they surface
10. Have fun "shopping"

The Top 10 Don'ts

1. Use an RFP to evaluate the vendors
2. Include too many vendors
3. Take too long
4. Minimize the implementation efforts
5. Buy what you don't need
6. Buy what doesn't exist
7. Be a pilot site
8. Forget technology
9. Ask the vendor for the implementation planning
10. Raise expectations too high

Source: First Consulting Group

relationship management and must be linked to medical management. Only then can an organization fully realize the value of an ERP toolset. Organizing business resources around the customer will change how an organization schedules, bills, monitors and coordinates care for patients.

The process of deciding how and when to proceed with such a massive change process must be CEO-driven and have the support of all top executives as well as divisional and operational managers. "We're talking about re-purposing the business intent of the organization," Boland says. "It's not easy, and you don't do it with a software project. Hundreds of millions of dollars worth of stillborn IT projects around the country attest to that. That's why committing to an ERP and CRM program that can produce return on investment should be an agonizing decision-making process for an organization."

For now, San Diego-based healthcare IT consultant John Trzeciak counsels a cautious approach acknowledging that integration of ERP and CRM in healthcare has not yet arrived. "IDN executives are going to start getting calls, if they haven't already, from big CRM vendors trying to sell huge multi-million dollar end-to-end solutions," he says. "Don't be seduced or confused. Take it piece by piece" by installing, for example, a version of the membership-retention modules that have been developed for large managed-care plans. At ground level, ERP remains essentially a tool for improving back-office operations.

Conclusion

ERP solutions can improve the efficiency of the increasingly complex back-office processes of healthcare delivery. However, the decision of whether to acquire one of these multimillion-dollar systems goes beyond automation and demands the involvement of top management. By its very nature, ERP involves a strategic view of the enterprise and its processes. An organization considering ERP should therefore also be evaluating such strategies as customer relationship management and medical management, although the integration of those solutions with ERP is still a long way off. The key point: ERP must be understood as part of a larger organizational strategy before it makes sense as an investment.

