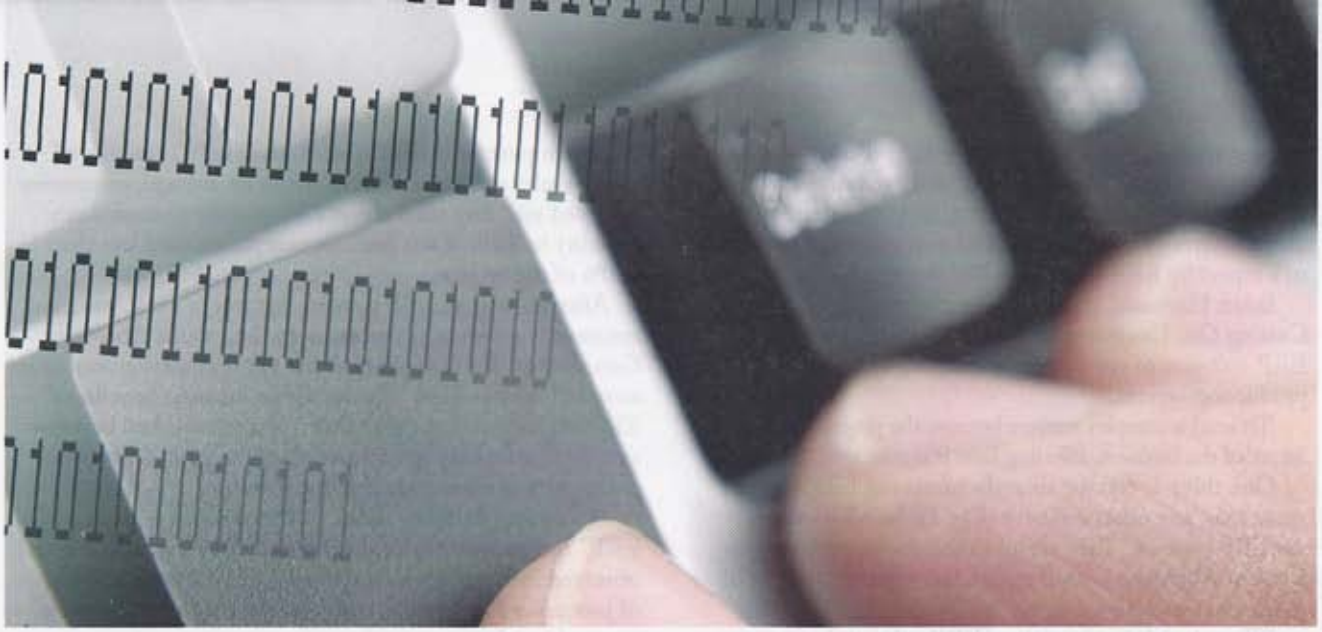


What Is E-R-P?

Everyone talks about it, and everyone does it, but do we really know what the phrase "enterprise resource planning" means? A *MODERN CASTING* STAFF REPORT

Yankee Casting, Enfield, Conn., had been doing it pretty much the same way for several decades.

The company had a system for tracking its engineering department and work orders. It had an accounting system to do its bookkeeping. Over the years, the company computerized the tracking system, creating its own custom software through a generic provider that could monitor its business resources and keep it on track. But the system lacked sophistication.

"The two programs didn't talk to each other," said Kevin Vecchiarelli, the company's vice president of engineering and co-owner. "We wanted to link the two together."

What's more, Yankee's system was not metalcasting-specific and didn't provide real time dollar amounts. The aerospace investment caster wanted an all-encompassing software package that could track actual castings as they went through each operation and passed over the hands of each operator. It found a provider of such a system and installed it in three to four months.

"It [has] made job tracking through the shop a lot easier," Vecchiarelli said. "My process sheets are much more detailed. I could hand them to any operator on the floor. We could implement pictures and tie them through routing. All of my operations and work instructions are barcoded."

Yankee Casting is not alone. Metalcasters have been doing ERP since before there was a name for it. Whether they were jotting notes about core inventories on a clipboard or logging metal chemistry data into a spreadsheet, production planning and metalcasting have gone hand in hand since the first production facility tried to coordinate melting, molding and coremaking.

Now, the process of monitoring production has come to be referred to as enterprise resource planning (ERP), and with the help of sophisticated software systems, it has become a route to greater efficiency and profitability in the metalcasting facility.

Blowing Up the Buzzword

Definitions for ERP systems abound. They "provide the necessary infrastructure that forms the operational and transactional system of record for manufacturers," according to information technology consulting firm the Aberdeen Group, Boston.

They are "cohesive information system[s] to cover all business needs from financial controls and reporting, the

management of our relationships with and sales to our customers, long range planning of capacity requirements and short range production scheduling, supply chain management, inventory management and cost controls," according to a report by ERP provider CDC Software.

Brian Harwood, plant engineer for Southwest Steel Casting Co., Longview, Texas, said his company added ERP software to gain accurate auditing of its production system.

"[It was] a complex venture because the project changes the 'heart' of the business, affecting how it is managed," he said.

One thing is certain: manufacturers use ERP systems more than any other industry (Fig. 1). So what exactly are ERP systems? They are all of the above, according to a recent Aberdeen Group report, but you only get out of them what you put in.

"There is risk in perceiving [ERP software] as a necessary infrastructure and neglecting to measure the business benefits resulting from its implementation," write the authors of the study.

At the heart of most (if not all) ERP systems are modules—the different divisions of the software that control each reporting system and work together to manage all aspects of a business. Each software system offers a certain number of modules (financial reporting, inventory management, maintenance, etc.) that each user can put to work.

In its study, the Aberdeen Group found that companies using computerized ERP systems used only a fraction of the modules made available to them; on average, companies surveyed said they used about 73% of their system's functionality in 2010. Even the best companies used less than 100% of the system.

After putting an ERP system's features to work, you must continually monitor its success, according to the Aberdeen Group study. The group found that top performing companies were 111% more likely to quantify the business benefits of ERP implementations than their competitors. And be aware that the system may not achieve all of the goals that you set out to achieve when installing the software.

"Providing visibility is one of the primary goals of ERP," the authors of the study write. "However...[we have] observed little progress in attaining real-time visibility of processes from quote to cash in the majority of survey respondents."

According to J.B. Brown, president of Bremen Castings Inc., Bremen, Ind., his company implemented a new ERP system several years ago to standardize its pricing and production orders and gain an even greater understanding of manufacturing costs.

"I look at how much manpower we utilized in this company on stupid things like chasing down payments because of inaccurate pricing," Brown said. "[ERP] has been a great thing. It was a lot of heartache [to implement], but knowing your costs is invaluable."

Rounding Up the Software

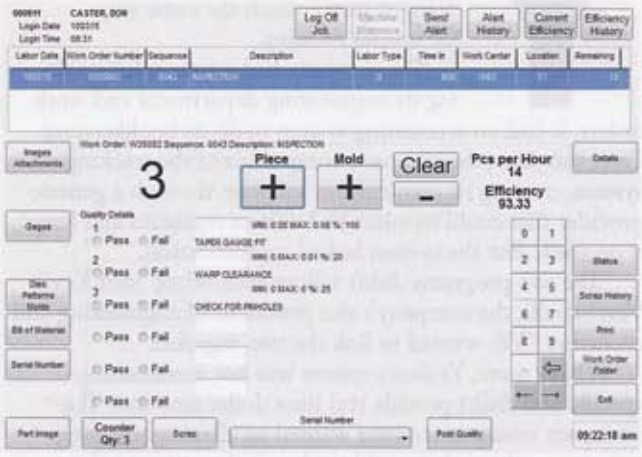
On the following pages is a look at the products provided by the three major suppliers of metalcasting industry-specific ERP software, with information provided by the software manufacturers.

Guardian Foundry System

Guardian Software Systems, Oconomowoc, Wis., has been designing software solutions for the manufacturing industry since 1987. Guardian's "Paperless Routing and Touch Screen Data Collection" module sets the Guardian Foundry System apart from other ERP software systems

Highlights of the system include:

- Online dispatching.
- Job information, including the ability to view images, specifications, and tools and gages related to the part, the bill of materials, available serial numbers, work order details, work order instructions, process instructions, and machine parameters and order status.
- Online counter for proper part count.
- Real-time direct and indirect labor collection.
- Real-time event driven and on-demand alerts.
- MSDS searches.
- Quality data tracking, including pass/fail assessment, min-max range, min-max alert range, check percentage and target.
- Scrap reporting.
- Optional interface to machine statistics.
- Time and attendance.
- Human resources functions.



Guardian features paperless routing and touch screen data collection.

The Guardian Foundry System's solutions are focused on the metalcasting industry. Guardian delivers foundry specific, business integrated solutions, designed for the way metalcasting facilities operate.

SYNCHRO ERP

SYNCHRO[32]'s distinctive business model allows users to lease the product with no large up-front costs.

SYNCHRO ERP, Austin, Texas, has been producing ERP software specific to the cast metal manufacturer since 1975. SYNCHRO's ERP system is a robust, established and dedicated ERP/MRP software system, developed exclusively for metalcasters by experts in the industry sector. SYNCHRO's departments include technical support, implementation, training, research and design, consultation, report design and programming.

Generic systems are ineffective when casting-specific production requirements are required. SYNCHRO offers its clients three significant factors:

1. A specific, dedicated ERP/MRP software system.
2. A skilled team composed of experts in the casting industry who strive to work with and provide solutions specific to its clients.
3. Research and development devoted to the needs of the casting manufacturer.

SYNCHRO ERP is delivered to the customer via a distinctive business model. The software is leased with no large up-front costs. For example, the system can be provided for $100 per user per month (with a 50% discount after 10 users). This includes all modules, all upgrades and all technical support. The ERP system can be integrated into any existing accounts software, including automated reporting, business-to-business linking, web integration, and automated shop floor services, such as spectrograph, tensile test, molding lines, equipment usage and other ERP systems.

On-site training and installation costs for an average of five users over eight days are $8,000. SYNCHRO ERP also offers a full working version trial system for three or four months that is installed on-site.

Odyssey

Odyssey can be deployed on your server or using the software as a service model.

Odyssey software from B&L Information Systems, Bridgman, Mich., is a metalcasting-specific ERP system that helps metalcasters maximize their resources, minimize costs and improve profitability through enhanced data collection, planning and software integration. Odyssey is designed to provide accurate, integrated and up-to-date information regarding job costs and profitability, scheduling, inventory control, shop floor management, scrap, metal certification, business intelligence, supply chain management, maintenance management, accounting, surcharges and tooling inventory.

The system allows users to spot potential overruns, quote tooling and contracted services, and compare estimated costs to actual costs. Odyssey facilitates scheduling by metal, heat, die/pattern, weight and quantity and allows metalcasters to communicate their requirements to suppliers. The Odyssey inventory module can serialize and track castings to decrease inventory errors.

The software delivers shop floor information quickly and with little effort, sharing real time information on quality and job status. It can compare actual scrap to estimated scrap, allow users to view scrap by product, molding line, pattern, die and metal, and capture the work in process value up to the step it was scrapped. The software also can be used to track the quality of each heat of metal, including chemical analysis, physical properties and final specifications.

Odyssey allows metalcasters to meet customer demands and reduce costs by enhancing collaboration, visibility and communication with suppliers. The system provides in-bound visibility to reduce out of stock conditions and provides overall business process management of the procurement cycle. The Odyssey maintenance management module eliminates most paperwork and organizes records, improves inventory management and reduces downtime.

The software tracks pricing and financial statements via the accounts payable, receivables and general ledger modules, and ensures accurate metal surcharges.

Odyssey can be deployed on your server or using the software as a service model. MC