

IT's Wild West Test:

Using ERP to untangle legacy processes and connect the building materials business

Pacific Coast Building Products finds success is all about the proper approach to ERP systems — precision planning and implementing defines a system that unifies and supports diverse manufacturing, shipping, distribution and sales processes across dozens of subsidiaries

by Mike O'Dell

One of the hallmarks of many successful companies these days is their strategy of making smart, timely acquisitions in order to map to evolving interests or requirements of customers, or simply to reach newer, more active marketplaces. Of course, this corporate strategy puts the IT department squarely in the critical path to support the internal growth in the number of IT system users and the resulting, complex patchwork of processes that somehow must be integrated.

Pacific Coast Building Products, like many growing companies, has adapted and upgraded its IT infrastructure to stay apace. As might be expected, each business acquisition added legacy information systems to the growing mélange in IT's back office - including some mostly manual operations supplemented by spreadsheets, highly-modified legacy application packages, small company-oriented products, and more capable systems of various brands and vintages.

With over 70 individual sites with mostly incompatible systems scattered throughout the enterprise, Pacific Coast management decided to bring the company together through the implementation of a common system at all existing facilities and provide a platform for future acquisitions. Because the enterprise is extraordinarily diverse — incorporating manufacturing



plants, distribution warehouses, dealers, wholesale and retail yards (outlets), and a construction division -- there was the requirement for the new system to be extremely tailorable. In this respect, it would have to be readily adaptable to each entity's needs while retaining certain common core functionality and underlying data structures inherent to the processes of each distinct operation.

Having completed the first steps of Pacific Coast's enterprise transition, the behind-the-scenes business process analysis and selection of the HP/SAP environment, real change and progress start to become visible to company personnel. Naturally, many more decisions will be made during deployment of enterprise ERP systems, and these significantly affect the degree of success and ROI the system will achieve. The fact that Pacific Coast could install HP servers and put the new system online without disrupting ongoing operations indicates that the system is a strong foundation, and will facilitate future upgrades.

"Deploying mission-critical corporate systems can be like changing wheels on a moving train," notes John Seitz of Enterprise Software Resources, a consultancy specializing in implementing ERP solutions. "Prior successful experience implementing and testing solutions is a prized commodity and clearly the focus of earliest steps defining requirements at Pacific Coast

and again as the IT group rolled up their sleeves and approached the enterprise deployment phase, having selected SAP and completed some limited pilot testing at corporate headquarters."

On your mark, Get set...

The first phase of the project was dedicated to team building, blueprinting the details of the business process solution, and configuring the system. In addition to the difficulty in coordinating such a large-scale roll-out, there were two major challenges: training many hundreds of users, and addressing the issue of master data; customers, vendors, materials, and pricing.

The Pacific Coast business units are very diverse in their structure, markets and objectives. And, since many were acquisitions, they did not benefit from a common heritage. Therefore, part numbers, classifications, naming conventions, and ways of describing and structuring bills of material and processes did not benefit from any commonality.

If the same product was made in a half-dozen plants, and sold through a number of outlets within the corporation, it was likely that each would use a different part number. If several plants bought the same raw material, it may or may not come from the same supplier and if it did, there was no way to know how much we bought in total. Economies of scale did not exist for Pacific Coast. One objective of our systems renewal project was to bring the corporation together to gain some of the synergy that should have been ours.

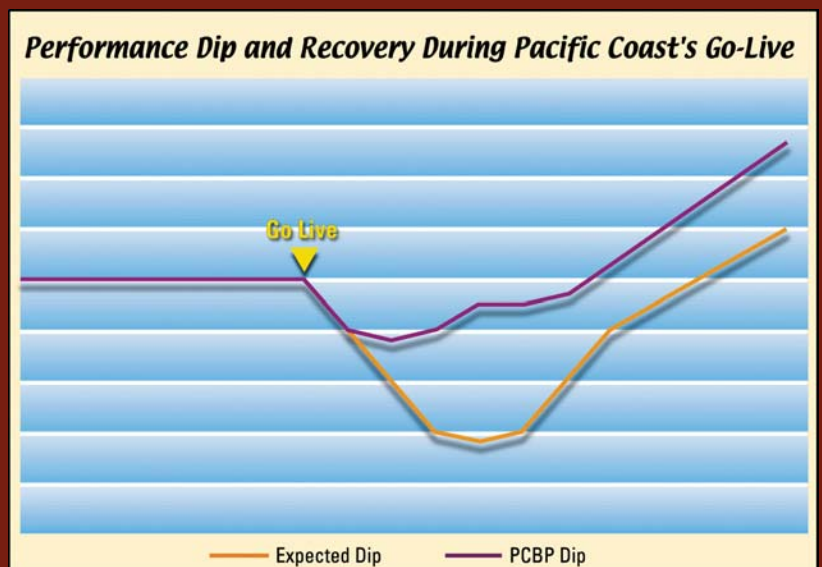
The training task was handled using a three-tier training approach. There is a separate, dedicated group for training the "super users" at each facility. These super users, in turn, take responsibility for training the rest of the users in the field.

We decided to implement the new system at the Basalite Concrete Products plants first. These facilities produce a host of concrete products using a continuous manufacturing process. Although this was one of our more complex environments from a systems perspective, that challenge was balanced somewhat by the fact that there was an SAP-experienced executive in charge. All eight Basalite plants went live in November 2001 with 350 users including some corporate personnel in central administration.

The second wave of the implementation targeted the Pabco Building Products division and the Pacific Coast Supply division, consisting of more than 40 disparate businesses. Pabco Building Products has two brick plants, a paper mill, a roofing shingle plant, three facilities that distribute and manufacture clay pipe, clay roof tiles and terra cotta products, and the gypsum wallboard plants. Pacific Coast Supply division brought their 27 Pacific Supply yards serving the western states on SAP live during this wave. We chose February 2002 for our 'go live' date with this group because it is a relatively slow season so any business disruption would have minimal impact.

We can't wait to see results from HP/SAP solutions

One of the customary challenges faced by IT groups is explaining to company executives about a dip in measured performance that frequently follows an ERP deployment. Dr. Michael Hammer, a prominent business technology consultant, described this effect in a presentation, *Harvesting the Value of SAP*, to the Americas SAP Users Group (ASUG). Companies have high expectations of these information systems — in terms of process improvement, data visibility, operating cost reductions, increased customer responsiveness, improved strategic decision making, etc. — so that after months of pilot testing and deployment, there is considerable apprehension to see a return on the investment.



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The Contracting group, Alcal/Arcade, scheduled for May 2002, required some additional functionality, specifically, the Service Management application. Alcal/Arcade specializes in the installation of insulation, roofing, and waterproofing. The month of May also included the Camelia Valley Supply yards, distributors of underground waterworks. Also included was the Material Transport and truck repair facilities.

The Wood products group is next. This group consists of Anderson Truss, Pac Door, Anderson Lumber, PC Wholesale, as well as the Diamond Pacific stores. The Diamond Pacific facilities distribute a full range of building materials to the retail and homebuilder markets, ranging from lumber to hardware. Additional software to handle point-of-sale transactions, quoting for cut packages for homebuilders, and the necessary additional configuration must be ready before this group goes live during the slow part of the business cycle in the winter of 2002-2003.

Although response time of the system is always priority matter of the IT group, it is especially important when point-of-sale enters the picture. It would not be acceptable, for example, to have customers wait at the counter while the system thinks about generating pick lists, receipts and invoices. Pacific Coast worked very closely with Hewlett-Packard throughout the project to be sure that the network of servers and communications equipment provides the needed response - and the hardware has performed flawlessly. Response time is less than one-half second for interactive tasks and the system has met all expectations through our rapid growth.

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You'll need to be tactful as you talk about these expectations versus "performance dip", but the message is to be realistic. When you go live with an SAP deployment, you are evolving from a traditionally operated organization of largely independent departments to an integrated federation that is unified by thoughtfully mapped process-based operations that supports cross-functional transactions. Users need a reasonable period after implementation for stabilization, fixing, re-tuning, and optimization.

The period involves cleaning up data and business rules, providing supplemental training for users, working with vendors to add functionality or address performance issues, or developing user proficiency through practice. It's a time users naturally require for bridging old and new processes before users' productivity/performance

Expansion plans call for the ability to handle more than 2 million invoices per year at the end of our two-year installation cycle, with each invoice having multiple line items. Pacific Coast has a cluster of 8 HP servers installed at the corporate offices in North Highlands, CA, mostly LXr series machines, running NT 4.0, SAP and Oracle.

Enlisting outside help...

In addition to assistance from the HP competency center and consultants on the hardware side, Pacific Coast used outside consultants from consulting groups such as ESR to help develop plans and resolve issues that arose during the system design and roll-out. Our SAP users are a diverse group; their business processes and requirements vary considerably from each other. Without astute consultants and knowledgeable business team members, this can result in a difficult to maintain, overly complex system.

One challenge is to bring information together at corporate with enough consistency and commonality to be useful for overall enterprise management and reporting. One of our goals, that we are on track to achieve, was to find simple solutions wherever possible and we were determined not to modify the SAP code. SAP has proven to be flexible enough to accommodate the needs of our wide-ranging array of businesses. We work hard to identify and understand each division's needs, tailor their piece of the system accordingly, and at the same time keep in mind that certain information is required for corporate purposes and make sure that those needs are met as well.

climbs and surpasses the legacy environment.

Experience at Pacific Coast suggests that the performance dip can be significantly mitigated. Having attended Hammer's ASUG presentation, O'Dell decided to plot his own performance dip graph using company-specific performance metrics against a model based on other ERP projects. He watched during the weeks following the first-round rollout of the HP/SAP deployment and found the actual dip proved to be considerably smaller and shorter than expected. O'Dell attributes this to the can-do corporate culture, extensive change management, and a detailed examination of business rules and familiarity with the data types and processes of each entity of Pacific Coast during planning stages, and the focus on expert user training.

ESR acts as an agency for us to locate and screen consultants with appropriate experience and skills before passing them on to us for consideration. ESR's roots are in the building industry; they know our business and can bring their own experiences, good and bad, to bear on our challenges. They have also done some very helpful benchmarking to help us determine what it will take to accomplish our objectives and what impact the system will have on internal skills and resources.

Even though our consultants have been a most valuable resource throughout the system roll-out, we are aware that there can be too much of a good thing. As we rolled out each division and site, appropriate consulting resources were provided to support the local implementation team. The site managers, however, were given incentives to become self-reliant - to "kick out" the consultants and pick up the responsibility for implementation and operation. The incentives seemed to have worked since most sites have become consultant-free within 5 to 10 days of rollout.

ROI Orientation

Pacific Coast hired PriceWaterhouseCoopers to perform a return-on-investment (ROI) analysis in parallel with the planning and roll-out of the new ERP system. This analysis was not intended to determine whether we should undertake the project at all, but rather to provide baseline measurements and track the impact of the system over time. Our entire approach is based on establishing an atmosphere of continuous improvement.

We are now measuring actual ROI against what was expected at this stage of the project. Our plan calls for documented savings of approximately \$4.2 million per year. So far, things are looking quite good. Understand that we are being very rigorous before giving the system credit for any improvements.

Primary improvements to-date include reduced indirect (MRO) costs, improved margins, lowered safety stock, better production planning leading to fewer losses and overruns, lower administrative costs, reduced transportation costs, improved collections performance, savings in accounts payable processing costs and improvements in the contracting billing area.

We are not yet finished with the first-round roll-out of the new system. The last group of sites will go 'live' this coming winter along with at least one or two new acquisitions that are currently being finalized. In rolling out these first eighty or so sites, we have developed a methodology that we will continue to apply as new acquisitions join the Pacific Coast family. We've learned a lot from our experiences rolling out SAP thus far. And... the journey continues.

About the Author

Mike O'Dell manages the IT and ERP systems for Pacific Coast Building Products.