Flipping the Switch

What's the best way to restructure your organization's processes? Three companies take different approaches to implementing SAP.

THE ORDEAL OF INSTALLING SAP AG's R/3 software does something underhandedly wonderful to IS and business people: It forces them to change the way they work together. R/3 breaks the mold of the traditional systems project, in which IS takes the lead and programming rules the day. And it places the burdens of implementation where they belong—on the business, which must develop a new way of working, and on IS, which has to make it happen.

"You have to treat SAP as a business, rather than an IT, project," says Karl Newkirk, partner in charge of the SAP practice at Andersen Consulting in Cleveland. "Success comes from having a very clear idea of how you want to run the business and then using R/3 to enforce the way you've modeled it." Easier said than done, according to R/3 veterans. Drafting processes that will improve the business is difficult enough; the project team must also make sure those processes fit with R/3's own complex array of highly structured processes. "You don't want to get too far down the reengineering path without keeping R/3 in mind," says Nancy H. Bancroft, a computer consultant in Evergreen, Colo., and author of *Implementing SAP R/3* (Prentice Hall Inc., 1996).

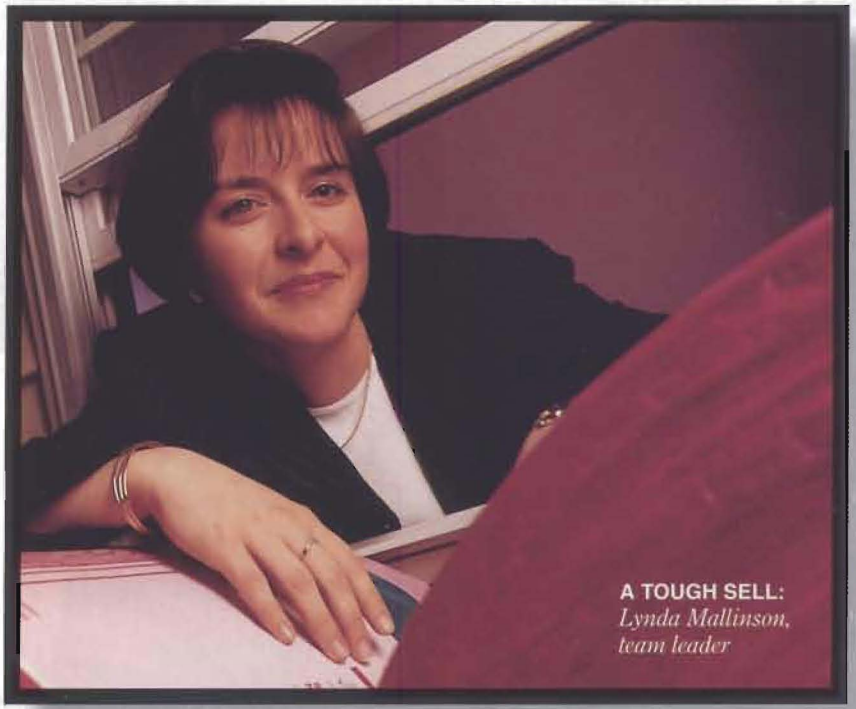
Given the tectonic shift caused by all this behavior modification and intense planning, R/3 projects can either erupt in constructive upheaval or rumble on pointlessly for years. Most companies implementing R/3 are struggling to maintain their balance on that trembling ground. According to the experts, typical R/3 implementations fall into three broad categories as described in this article.

The Big Bang Strategy

STRUCTURAL REORGANIZATIONS often provide the catalyst for big bang R/3 implementations (the most common approach to R/3 implementation) in which companies cast off their legacy systems and implement a single set of R/3 processes across the company.

That was the case at Owens Corning, a maker of fiberglass reinforced composites and building materials systems located in Toledo, Ohio. R/3 became the technology driver to reduce the number of legacy systems from more than 200 to less than 10 and to create a single set of integrated supply chain processes across the company's 80 different manufacturing sites around the world.

Owens Corning is taking a slow-burn approach to the big bang. The project is being sliced up into four releases, each growing in scope and size until the final release, which will encompass the entire company, is completed in April 1997. Implemen-



A TOUGH SELL: *Lynda Mallinson, team leader*

PHOTO BY ANDY GOODWIN

The Implementer

AS A SELF-CONFESSED computer fiend, Sandra Blanckensee used to know the system at Fujitsu Microelectronics Inc. absolutely cold. Since the company went live with SAP R/3 in April 1995, however, all that's changed. "With SAP, you have to resign yourself to the fact that you're in a training mode all the time." She adds: "It's so integrated and complex; I'm not sure we'll ever understand it completely."

Sandra Blanckensee
planning manager for memory products, Fujitsu Microelectronics Inc., San Jose

If that sounds like frustration, don't be misled. The depth and intricacies of the system keep her challenged and interested. "I'll spend at least an hour each day trying to figure out how to do new things on the system," she says. That, despite being quite expert in the system already (Blanckensee was a part-time member of the project team that installed SAP at Fujitsu). Regardless of her interest in SAP, however, Blanckensee admits that the software's complexity and the seemingly constant wave of updates from SAP can be a torment, especially for those expecting to learn the system once. "Just learning the small piece of SAP you need to deal with on a regular basis isn't enough," she says. "You have to understand the rest of the business, too. I tell people who are frustrated to learn the work first—you will come to understand SAP as you go along."

tation began with the corporate finance group in Toledo and then moved to two business units, which became incubators for nurturing a set of universal business processes designed to satisfy the overall project motto: simple, common, global.

The project team, which now numbers 250, swallowed up three floors of Owens Corning's office tower in Toledo in the spring of 1995. Centralizing the team and the decision making has helped maintain the global focus and has prevented any one function or business unit from dominating the discussion. Since so many complex decisions need to be made quickly—Owens Corning hopes to finish in 100 weeks—everyone works on top of one another. In addition, the proximity to bigwigs means that if a big issue comes up that the team isn't empowered to handle, the team members can kick it upstairs—literally.

"GOOD ENOUGH REENGINEERING:" *CIO Mike Radcliff*

The team is divided into five different process groups, each with representation from the local business units, IS and business people from across Owens Corning. Councils made up of representatives from all the teams ensure that each specific process meshes with the rest of the system. "Integration is the biggest advantage—as well as the biggest headache—of SAP," says David Johns, director of global development. "If you do one thing in the finance team, it affects everything else you do, so keeping the integration coordinated across teams is really difficult."

Keeping the business units informed, involved and happy when things are moving so fast in Toledo is also a big challenge. Team members representing the various business units are forced to weigh the quest for global integration in Toledo against the needs of the business units back home. One of the first implementation pilots to wrestle with that issue was the Building Materials Europe (BME) unit in England. Lynda Mallinson, development leader of the BME team, spent three weeks in Toledo each month and a week back home talking to her business unit. "The links to the business unit got stretched," she says. "We didn't want the process team to appear to be sitting in an ivory tower telling them how to run their business."

The balancing act was especially difficult when it came down to the specific functionality of R/3. In most specific process areas, SAP is close enough to best-in-class to not offend legacy loyalists (experts estimate that is true about 70 percent of the time). But in some areas, SAP falls short. Specifically, Mallinson's unit had developed a production planning system that outperformed anything offered by SAP. Chucking an excellent legacy system while taking a step back in functionality was a tough sell, she says.

Yet SAP never intended for R/3 to compete with best-in-class. The biggest benefits of R/3 are in its degree of integration—the process planning team must envision the possibilities. Mallinson's team did; with R/3, the production planning process was centralized across three of BME's manufacturing sites that previously had op-

PHOTO LEFT BY CINDY CHARLES; PHOTO RIGHT BY ANDY GOODWIN

The Client/Server Enterprise Applications Market is Booming...

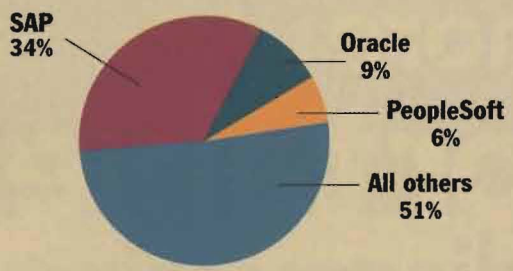
($millions, worldwide revenues)

...and SAP AG Revenues are Soaring...

($millions)

...as SAP Garners Top Market Share...

(Share of client/server applications market worldwide)



...in an Ever-Burgeoning Field.

(1994 rankings of client/server revenues)

COMPANY	PRIMARY SOURCE OF C/S REVENUES
SAP	Acct., HR, Dist., Mfg.
Oracle	Acct., HR, Dist., Mfg.
Computer Associates	Acct., Mfg., HR
PeopleSoft	HR, Acct., Dist., Mfg.
Hyperion Software	Acct.
Baan	Mfg., Dist., Acct.
Great Plains Software	Acct.
Dun & Bradstreet Software Services	Acct., HR, Dist.
Platinum Software	Acct.
Lawson Software	Acct., HR, Dist.

Acct.=accounting; Dist.=distribution; HR=human resources; Mfg.=manufacturing

SOURCE: INTERNATIONAL DATA CORP.

erated with independent systems. And with continuous upgrades pouring out of SAP headquarters in Walldorf, Germany, Mallinson could hold out hope that the gap in functionality would eventually be filled.

For Owens Corning, the overriding goal is not to perfect the functionality of the system but to develop processes that work well enough to install quickly what Owens Corning Vice President and CIO Mike Radcliff calls "good-enough reengineering." Too much tinkering turns the implementation path to mud.

SAP offers so many different options and sucks up so many resources in the company that it's easy to get bogged down.

"A project like this can take as long to implement as you want it to," says Johns. Indeed, tough scheduling seems to be the only reliable way to control most R/3 implementations. The system offers so many different options and sucks up so many resources in the company that it's easy to get bogged down. "It's like having the streets torn up; you start to figure you may as well change everything while you're at it," says Radcliff.

Top management, particularly CFO David Devonshire, keeps the heat on under the project. He installed a controller in Radcliff's unit to keep an eye on project costs, and he makes it clear that if a division wants to tear up a street that's not in the plan, it will have to find a way to pay for it. "These things really have to be hawked," he says.

Despite clear support from the top, however, the team had trouble keeping to the schedule early on.

The Super User

FOR KEVIN FUNK, booting up SAP is like ducking into the nearest phone-booth to don a superhero suit. Make that a super "user" suit. Funk has an eye for business processes and a passion for complexity that allow him to use the powers of SAP to their fullest potential. Funk's background is in accounting, and he's always enjoyed fitting processes to computers; he was involved in a couple of systems implementations and reengineering efforts at The Seattle Times Co. But SAP was truly a showcase for his talent of keeping an eye on the invoice as it bobbed along in the business process currents. More important, it demonstrated his ability to teach others how to judge the currents. "You can't just show people how to operate the system," says Funk. "They need a sense of what happens in the different processes and why the system works the way it does."

Kevin Funk
senior consultant, International Consulting Services (ICS), Deloitte & Touche LL, Seattle

Super users like Funk are invaluable to an SAP project, which is part of the reason he was snapped up by ICS, Deloitte & Touche after 13 years at the Times Co. and given a 35 percent salary increase. "You need to have the skills of the super user and then some," Funk says of SAP consulting. "The client doesn't know you're a super user; you have to prove it each time."

The darkest hour came in August 1995 when Johns pulled the entire team off the project for an exhausting two-day summit. "We called it the Nuremberg trials," he says. "Up to that point, there had been an underlying attitude that this was like every other systems project—if something wasn't going right, the schedule could always slip a little. We spent a very significant two hours making sure everyone knew that this was not to slip behind schedule."

Two intense hours became two tense days. Undercurrents of resentment between IS staff and the business people were revealed—undercurrents that bubble beneath most big R/3 projects. When implementation began, the business people fell back on old habits and ceded responsibility to IS, which accepted it a little too eagerly, leading to delays and bickering.

"The IS people felt that the business people weren't taking on enough accountability, and the business people felt they weren't being listened to," says Johns. After airing differences at the two-day summit, however, the project team regrouped. "From the beginning, we had been excited by the possibility that this wouldn't be the usual throw-it-over-the-wall approach to building a system," says Johns. "[The summit] was the first point at which IS and the business truly began to feel that they were in this together. The friction between us melted away after that."

After a grueling summer and fall of process crunching and planning, the BME division pilot went live in January 1996. "We flipped the big switch on a weekend, expecting problems," says Mallinson, "but we came in on Monday and it was working fine. We started feeling brilliant," she laughs.

> "We flipped the big switch **on a weekend, expecting problems,** but we came in **on Monday** and it was working *fine.* **We started feeling brilliant.**"
>
> *–Lynda Mallinson*

But by Tuesday, strange things began happening. "It was like a wave rolling through the system," she says. As employees began tentatively entering orders, mistakes flowed and multiplied through the system. Production tried to fix the mistakes made during the order-entry process but added a few mistakes of its own along the way, and so on down the line.

The extraordinary integration that Owens Corning had hoped for with R/3 had arrived—and it was over-

SAP BOOKSHELF

Implementing SAP R/3
by Nancy H. Bancroft, Prentice Hall ISBN 0132621711

Client/Server Development With SAP's ABAP/4 Development Workbench 3.0
by Thomas Curran, Prentice Hall (due out July 1996), ISBN 0135253950

Customizing SAP's R/3 Applications With ABAP/4
by Rudiger Kretschmer, Sybex Inc. ISBN 078211881X

The SAP R/3 System: A Client/Server Technology
by Rudiger Buck-Emden and Jurgen Galimow, Addison-Wesley Publishing Co., ISBN 0201403501

Using SAP's R/3 Client Server Business Process Blueprint Tool
by Thomas Curran and Gerhard Keller, Prentice Hall Inc. (due out August 1996), ISBN 0135211476

SOURCE: COMPUTER LITERACY BOOKSTORES

PHOTO BY RICH IWASAKI

The Change Agent

OWENS CORNING doesn't worry about change management. That's because it exists, basically, in one person. David Johns must coordinate SAP delivery across five different project teams on time and on budget.

David Johns
director of global development, Owens Corning, Toledo, Ohio

Beyond keeping 250 different team members focused and working together, he ensures that the project goals of "common, global and simple" aren't shoved down the throats of Owens Corning business units around the world, since it would be relatively easy for the Toledo-based team to huddle and make SAP process choices for the company unilaterally.

"You'll always have variations in processes at the business unit level with SAP, particularly around customers," says Johns. "It's my job to make sure the variations are the exception rather than the rule. It's a constant struggle."

This task isn't made any easier by the 100-week project schedule, which is beyond aggressive—it's brutal. But a survivalist camaraderie among team members and a heightened sense of visibility at the company has emerged. The bigwigs know when Johns and his teammates put in 70-hour weeks, which helps propel him through those weeks. "It's the kind of opportunity you hope for when you join a company—to impact the way it works," he says.

whelming. The integrated data flowed so quickly through the system that there was little opportunity to track down mistakes before they showed up on everybody's screens. "Mistakes are very visible with R/3," says Mallinson, "and people's efforts to go back in and try to correct those mistakes are very visible too. SAP likes you to enter information the right way the first time; it doesn't offer easy ways to go back in and correct things."

> By openly recognizing **the changes** *required* **of its employees, the company crossed one** of the major hurdles **of implementation.**

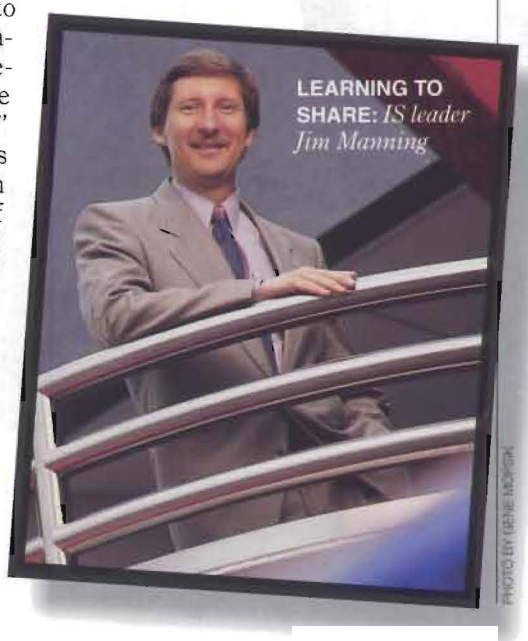
By the second week, the waves had reduced to ripples, but Mallinson was surprised at the extent to which the trained users depended upon the so-called "champions" or "super users," business people trained to be the local system evangelists for their co-workers. "We did a lot of training, but it happened just before implementation, and people became very dependent," she says.

Owens Corning's experience is not unusual. Training is proving to be one of the biggest implementation surprises, both for those designing the system and for those using it (see "Surprise, Surprise," Page 58). Owens Corning estimates that training costs will more than double, from an original budget of $3.1 million to $7 million, or 10 percent of the $60 million to $70 million estimated total cost of the project. "You're really creating a new set of skills and a much more literate workforce," says Devonshire. "People not only need technology literacy, but they need to understand the business processes."

By openly recognizing the changes that will be required of its employees as well as its processes, the company has crossed one of the major hurdles of implementation as it begins work in the company's other business units. That attitude seems representative of Owens Corning's view of R/3—that it is too big to be perfect. Company leaders talk openly about problems—which means they are addressed quickly—and everyone is too busy to point fingers. "For the first time, we have true co-leadership of a systems project," says Johns. "Owens Corning will never do another project like this without co-leadership."

The Franchising Strategy

THIS APPROACH SUITS large or diverse companies that do not have enough common processes across business units to do a big bang implementation. Independent R/3 systems are installed in each unit, linking common processes across the enterprise as seems appropriate. For big, decentralized companies that choose to do multiple implementations of R/3, building a stockpile of accumulated learning and experience is the only way to save time



LEARNING TO SHARE: *IS leader Jim Manning*

PHOTO BY IRENE HOSIK