EXECUTIVE REPORT

DOING MORE FOR LESS

Positive alternatives to slash-and-burn cost-cutting

BY MICHAEL L. SULLIVAN-TRAINOR

Sometimes, a little innovation means a lot. Skip Abadie, a systems programmer at FMC Corp.'s Dallas data center, saved the company $150,000 by writing a program that allowed FMC's largest division to cut its printing volume in half.

Since then, Abadie has become an FMC systems fellow — a special job category allowing technical stars to earn managerial salaries. He received an award of savings bonds for his innovation, and a framed certificate hangs in his home. Notification of Abadie's achievement is posted at the data center along with a host of other certificates for similar achievements by his co-workers.

Such recognition for providing more and better information systems service for less expense is standard procedure at the facility — one of the most cost-effective in the country, according to researchers at Nolan, Norton & Co., based in Lexington, Mass.

"Improving service and reducing costs are embedded in the people and the culture of this building," says Randall J. Gannaway, FMC's data center director.

Take it to the limit

Just as there is a cutting edge in using IS for strategic advantage, there is a hair-raising lead position for IS managers who push the idea of doing more for less as far as it can go. Gannaway is one of a growing band of managers who use every resource at their disposal to set new standards in IS efficiency.

According to Susan Falzon, associate director of Partnership for Research in IS Management (PRISM), the research arm of Index Group, Inc. in Cambridge, Mass., doing more for less has become an increasingly important issue for the 115 Fortune

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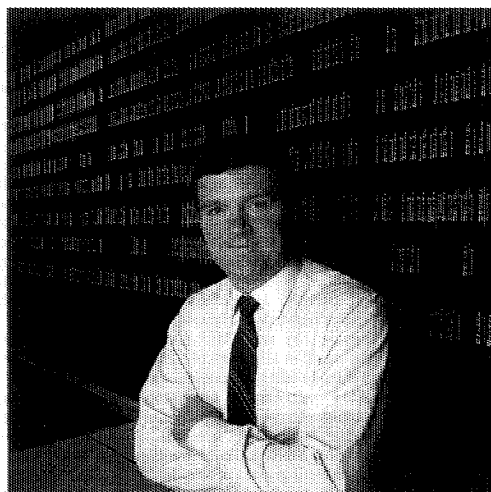
FMC's Gannaway *says success means cutting costs while improving service*

250 companies that PRISM tracks.

While many managers agree that doing more for less is a worthy goal, the extent to which they apply this philosophy to their operations varies greatly from company to company. In its purest definition, doing more for less means providing more information services for less budgetary expense.

Accomplishing this goal requires altering traditional IS methods such as investing in technology for its own sake or growing just because business volume grows. Rather than converting to this difficult new discipline, some managers try less disruptive tactics — such as eliminating minor application maintenance — to produce small savings.

IS organizations have "become pretty good at making minor changes for incremental gains," Falzon says.

Managers engaged in significant efforts to do more for less may try decentralizing various functions and assigning them to individual business units. However, rather than decrease costs, these efforts often only disperse the same IS budget among different corporate groups, Falzon says.

In fact, the recent recentralization trend — bringing pieces of the IS function back into a central organization — results in

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part from the need to recapture economies of scale and reduce expenses caused by duplication among decentralized functions.

To capture the order-of-magnitude of savings derived solely from doing more for less, IS managers have two choices: either implement a new discipline in which cost-effectiveness supersedes traditional IS attitudes, or try outsourcing, Falzon says.

If a company possesses the tools and commitment to revamp its IS operations, then calling on an outside supplier may not be the best answer. Outsourcing is a good cost-savings alternative for companies that see their IS functions — particularly their data centers — as inefficient, says Alan Hammersmith, a principal at A. T. Kearney, Inc. in New York. However, he says that outsourcing is usually not cheaper in the long run.

"If the problem with IS is something you can correct, don't think of outsourcing," agrees Robert Suh, an associate at Temple, Barker & Sloane, Inc., based in Lexington, Mass.

Creating a new doing-more-for-less discipline requires a cultural shift in the way IS operates. For example, when FMC, headquartered in Chicago, decided to save costs by consolidating two data center operations into a single center in Dallas, the company assigned a special IS planning group the task of creating a management philosophy that would make it a cost-effective organization from the ground up.

The Dallas data center, established in a former Braniff Airways reservations center in 1981, is ranked in the top 10% of 200 data centers tracked by Nolan Norton. "They are more efficient than most," says Allan Froehlich, senior manager at the management consulting firm. "They spend less on processing and have less money invested in head count than other centers their size. But the overriding thing is that they've really managed the process."

The center's staff of 150 has worked at being intensely cost-effective for nine years, and the

Cost-cutting

fruits of their work are beginning to show. Unit costs, in terms of CPU usage, have decreased 50% since 1986, while usage itself has increased more than 300%, Gannaway says. The center is now operating at 99.9% availability 24 hours a day.

As FMC's main data center, the Dallas site serves 45 locations in the U.S. and overseas. The center runs four IBM 3090 mainframes, an Amdahl Corp. 5890 and a Digital Equipment Corp. Vaxcluster. FMC manufactures defense equipment, machinery and chemicals, with its largest operation, the San Jose, Calif.-based Ground Systems Division, providing 60% of the center's processing load.

With its goal of breaking even on IS expenses in mind, the center returns to the users any chargeback amounts in excess of

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GTE

costs. Chargeback costs have been going down at a rate of 15% to 20% a year, and unit costs are currently going down 25% a year, according to Gannaway.

The continual reduction in IS costs at FMC is partially because of an overriding management discipline that emphasizes RAS (reliability, availability and service-ability), a set of performance measurements introduced by IBM for its large systems hardware and software.

FMC's operations are based on meeting ever-advancing goals of reliability, which is reducing the time systems are down; availability, or increasing access to the systems; and service-ability, which means decreasing re-

sponse time. These statistics are the basis of internal performance evaluations as well as part of service-level agreements that the data center has negotiated with its clients.

Acute attention to RAS measurements is an essential part of management policies at any large data center whose high volume demands a strict understanding of performance. But detailed concentration on RAS is unusual for small- to medium-size centers such as FMC. "Their focus on RAS is very intense, given their size," Froehlich says.

Two key areas in which FMC gets more for less than comparably sized data centers are tape-storage and printing expenses. Tape-storage operation expenditures have been reduced 49% since 1986 through automation, and the labor required for the printing operation has been cut back dramatically through the practice of farming out large volumes of printing to the divisional IS operations that the center services.

The biggest savings, however, comes from a technology acquisition strategy that requires CPUs or direct-access storage devices (DASD) to be swapped in or out of the data center every six months. The reason for this activity is the center's plan to ride the curve of equipment value. Hardware is acquired early in its life cycle after prices have peaked and is then jettisoned before the value is gone.

"Before a box goes in, we analyze everything: the RAS benefits, the technology benefits and especially the economic life of the system," Gannaway says.

A technology acquisition team of four staff members constantly studies consultant residual value predictions and then makes its own assessment. No processor is leased for longer than two years because its value would decline too much, Gannaway says.

This strategy allows FMC to use state-of-the-art systems to gain the greatest efficiency from its processors. But the emphasis on costs may also mean skipping a generation of systems because it doesn't meet the cost/benefit criteria.

"There wasn't a doubt that everyone in the building wanted the 3480 because it was the latest technology," says Joe "Rocco" DeAngelis, who leads the technology acquisition team. "But the systems were tough to justify, so the decision was postponed until the time was right."

IBM's 3380 DASD wasn't so lucky, however. The data center skipped that generation of hardware because the incremental benefits of the 3380 were not worth the expense, DeAngelis says. Now, the center is switching to IBM's latest DASD, the 3390.

After many years of employ-

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CBS

ing these strategies, the center is nearing the point where substantial cost savings can no longer be achieved through efficiency. So the center is now offering its services to companies outside of FMC.

Currently, 10% of the processing business at the center is provided by non-FMC clients. The staff is also offering DB2 training to other companies as an added revenue generator. Gannaway says he expects 30% of the business to eventually come from external clients without affecting the service level provided to internal ones.

"If we doubled our volume tomorrow, it would have very little impact on our day-to-day operations because of the methodologies we use," he says.

Instilling a new discipline requires a consistent methodology that acts as an outline for change. In some instances, the outline is formal, as in FMC's case; in others, informal ideas become the focal point.

"The significant cost savings happen when people step back and fundamentally re-examine the way things are done today and look at the way they might be done differently," Falzon says.

The GTE approach
The corporate IS group at GTE Corp. in Stamford, Conn., did just that. After reviewing the company's needs, the group realized that monitoring and measuring corporate IS activities within the various divisions was not contributing to the corporation's bottom line, according to Dennis Murphy, the group's director. Thus, corporate IS greatly reduced its watch-dog function and dedicated itself to leveraging the resources of internal IS functions to provide more service for less expense.

The group carries out this new approach in two key ways:

by providing confidential evaluations of the effectiveness of divisional IS activities and by transferring knowledge about cost-effective IS projects from one division to another.

Because of changes in the size of GTE's business in recent years, the corporate IS function has been reduced from 100 to 38 staff members. During the same period, the demands on IS within the company have grown significantly, Murphy says.

The group serves more than 100 business units within GTE. Each unit runs its own IS function. The functions range in size from very large to very small.

Faced with the opposing forces of reduced staff and increased demand, Murphy's group set in place a rule of thumb: If a project is not worth $1 million or more in savings to the company, don't do it.

While occasional exceptions are made for strategic projects, the rule has helped the group eliminate requests for support for less cost-effective projects. For example, the staff would often assist on projects that would improve a single group or individual's productivity by 10% to 15% but not affect the firm overall.

"We don't evaluate PC software anymore," Murphy says. "Likewise, on the high end, we've abandoned a lot of the more esoteric considerations like what methodologies you should use for information resource management. We've had to look outside for support in the few instances where those things have become an issue."

GTE's corporate IS group still provides guidelines to the divisions, but a great deal of time is devoted to the new role of evaluating the performance of IS units within the company.

"We only go in if the business unit asks for our help," Murphy

Sabre Computer Services' Kiernan

says. "When we find something, we don't go around the company waving a flag about it. We report the results only to the business unit managers."

Often, the group's recommendations involve reorganizing the unit's IS function. For example, one investigation found that application maintenance demands were bogging down a

unit's IS organization, preventing new development. Murphy's team recommended the creation of two separate organizations: one devoted to maintenance and one focused on future systems requirements.

In addition to this function, the corporate group acts as a knowledge-transfer point for company IS activities.

"We serve as a switching center — the facilitator for getting different units together to exchange information," Murphy says.

While GTE is obtaining more service for less investment through information exchange, other companies are employing more drastic measures to gain the same end.

Time for a new program
At CBS, Inc. in New York, James Halsey III, vice-president of IS, has decided that his company's applications development efforts must be brought into the 1990s.

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SABRE COMPUTER SERVICES

vestment," Halsey says.

Until last December, CBS's applications development was done by 95 IS professionals organized in seven different groups. The primary tools for that work include mainframe-based systems, such as PL/1, CICS and VSAM.

This environment will be converted into a local-area network-based shop using the latest in computer-aided software engineering tools and the most efficient systems development methodology. The 95 professionals have been reorganized into two groups: one focusing on transforming applications requirements into actual systems and the other concerned with defining the applications needs in conjunction with internal clients.

The first group is based at a central location, while the second — made up of business systems analysts — is distributed to various client locations.

"These analysts are dedicated to serving specific clients to

learn their businesses," Halsey says.

A three-year program of conversion, the reorganization will require an investment of additional IS funds. However, the actual impact on the IS budget is not yet clear.

Rather than hard figures, Halsey and CBS' management made the decision based on faith in the benefits that will accrue from the modernization of applications development.

These benefits include fewer systems defects, quicker and better targeted application delivery and less labor for applica-

targeted IS applications on the right size platforms. Rather than rely on a mainframe environment, MIS Director Stephen Martin is concerned with "right sizing" applications to ensure the greatest efficiency.

"We have taken some of our mainframe applications and dropped them into a LAN supported by PCs," he says. "This strategy frees up mainframe cycles and extends the life of the system. Instead of spending $1 million to do an upgrade, I might spend $20,000 to put in a PC network."

Martin was able to delay a

says. "He doesn't know the environment, so chances are he'll write the application for CICS."

To provide staff members with a wide variety of experience, Martin assigns them to different projects on a rotating basis. When a consultant is brought in, staff members work closely with him to receive hands-on training.

Unteaching old dogs
While creating multiskilled IS professionals is a key to doing more for less at T. Rowe, getting the staff to unlearn some traditional systems practices has been part of the challenge for Pennwalt Corp., a subsidiary of Atochem NA, a chemical company based in Philadelphia.

The company's strategy of decreasing the IS budget in the face of increasing computer use required giving up research-oriented IS projects in favor of those that directly affect the business units.

"We reduced costs without a general reduction in force," says Robert Rubin, vice-president of IS. "We tried to get closer to the business units to find out their problems. Then we focused all our efforts on their particular problems. We cut way back in areas of research and projects that did not have utility in the near term."

The new IS discipline, which began in 1984, also uncovered cases in which projects were going over budget because the IS staff was trying to deliver the "absolute system." Instead of following that approach, the group focused on building applications "a piece at a time," with prototyping and increased user interaction.

One project that was eliminated under the new order involved an electronic mail system. The system was canceled when a re-examination found that most employees would not have a use for such a system. A commercial automated voice-messaging service was implemented instead at a substantial cost savings.

"We're still doing research, but instead of taking a shotgun approach, we're using a rifle," Rubin says.

The IS department had to pay a price in terms of high staff turnover for the transition to a more cost-oriented style. "Initially, some people were not comfortable working in what was no longer a traditional DP shop," Rubin says.

Another cost-savings method used by Rubin's group is an unusual pricing schedule related to the length of time users are willing to wait for processing. Instead of simply charging users more for peak hours as some shops do, his strategy is to give the control to the users.

If, for example, a user is willing to wait up to two hours for a job to be processed, then he is

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charged a lower rate than someone who can wait only 15 minutes. The system forces the user to decide how soon he needs the information processed, rather than requiring IS to set the limits.

Having seen is believing
Experience has made Rubin a believer in the philosophy that the best way to make IS more cost-effective is to make the business process more cost-effective as well. His biggest success occurred when IS spurred personnel and payroll to combine their functions, cutting staff costs in half through attrition.

The change began when IS was assigned the task of combining multiple departmental payroll systems. Rubin's staff convinced management to create a single corporate payroll system, and since personnel review was tied to payroll, record-keeping for that system was combined as well.

"We had one personnel/payroll system and two clients — personnel benefits and treasury," Rubin says. "We then said that since they both operate off the same system, why not merge the two departments? So we did."

Although such measures are

effective, they are not likely to be an easy sell. "Since hara-kiri is not the favorite form of amusement in corporate America, you're not going to see middle managers recommending that their departments be merged with some other group," Rubin quips. "Only IS can take a higher level view and recommend such changes. Then it has to be done carefully."

As companies move into the next decade, doing more for less will become the norm rather than the exception. If Rubin's career can be taken as an example, IS managers who capitalize on this trend now by arming themselves with a full set of strategies will gain additional responsibility.

Until recently, Rubin was head of IS at Pennwalt. When Pennwalt's parent company, Elf Aquitaine in Paris, decided to combine its North American holdings — Atochem, Inc., Pennwalt and M&T Chemicals — under Atochem NA. Rubin was placed in charge of IS for the combined company. This new entity is twice the size of Pennwalt, and Rubin reports directly to the chief executive officer.

"This industry," he says, "requires people to be very innovative just to stay even." ●

Loud and clear
Nearly all U.S. IS managers polled say they understand the rationale for their 1990 budget levels. Most managers report increases, but average growth dropped to 6.9% from 7.5% in 1989.

IS clearly understands the reasons for the budget increase or decrease

3% Disagree
5% Neutral
29% Agree somewhat
63% Agree strongly
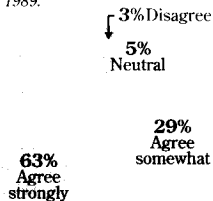
Percent of respondents (base of 243)

Source: Index Group, Inc.   CW Chart: Marie Haines

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tions development overall. "It's no utopia, obviously, but we can work smarter on these projects," Halsey says.

Ultimately, Halsey hopes the change will free up some discretionary resources that can be used for additional systems projects.

It's in the air
The idea of modernizing applications development is a key doing-more-for-less strategy. Even the most successful IS operations are re-examining their development procedures to reap the benefits of new methods.

For example, American Airlines is downsizing parts of its Sabre reservations system. Mainframe applications are being broken down and placed on smaller, more accessible CPUs to speed development and boost staff productivity, according to Thomas Kiernan, president of the Sabre Computer Services Division in Dallas.

"Sabre is a very large, complex and integrated single system involving lots of applications and data, and we want to make it more accessible," Kiernan says.

In addition, the Sabre IS group is trying to reduce the complexity of the system by working more closely with users to develop applications.

Size it right
On a much smaller scale, T. Rowe Price, a Baltimore-based investment firm, is using a staff of 52 professionals to provide

$1.2 million mainframe upgrade for five months by downsizing applications.

The company has historically outsourced the majority of its IS work, but as information management has become more critical in recent years, T. Rowe has beefed up its IS operation.

"We bring our in-house resources to bear on those areas where we can add value to the business or where it is of strategic importance to control the information," Martin says.

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T. Rowe's outsourcing background creates an atmosphere of tight cost control that drives internal IS.

For example, to carry out the right sizing strategy Martin hires IS professionals who can be trained or have experience in multiple technology environments.

"A CICS batch programmer with no other experience is going to have a heck of a time trying to decide whether an application should run on a PC," Martin