RIGHTSIZING

TIME WAITS FOR NO TECHNOLOGY

By Karyn Pallay

*I*f you think the time to rightsize is now, you're not alone. According to a recent Dataquest survey, 46 percent of 385 organizations surveyed, big and small, are considering migrating their systems to a different platform. Other surveys cite as much as 40 to 60 percent. This article addresses the question "What is rightsizing?" and offers some timely advice on how to put the "right" in your rightsizing strategy.

LANE TWITCHELL

Rightsizing, downsizing, smartsizing, resizing—you can't open a network trade magazine these days without running across one or the other of these trendy buzzwords. So what is this phenomenon all about?

It seems pretty clear: the technologies available today are more cost effective than the systems of yesteryear, and they're easier to use. These technologies, in conjunction with business reengineering, or the aligning of business objectives and technology, help put power and information in the hands of users, thereby reducing overall business costs. What business doesn't want to take advantage of that?

Although the terms *rightsizing, downsizing, smartsizing,* and *resizing* have slightly different nuances, most industry experts agree they all mean basically the same thing. *Basically.* This is the catch, for each term seems to grow out of the other in no clear linear or hierarchical fashion.

To quote one source, who would prefer to remain anonymous, these industry buzzwords "allow technically bankrupt and cognitively challenged individuals to appear knowledgeable during power lunches."
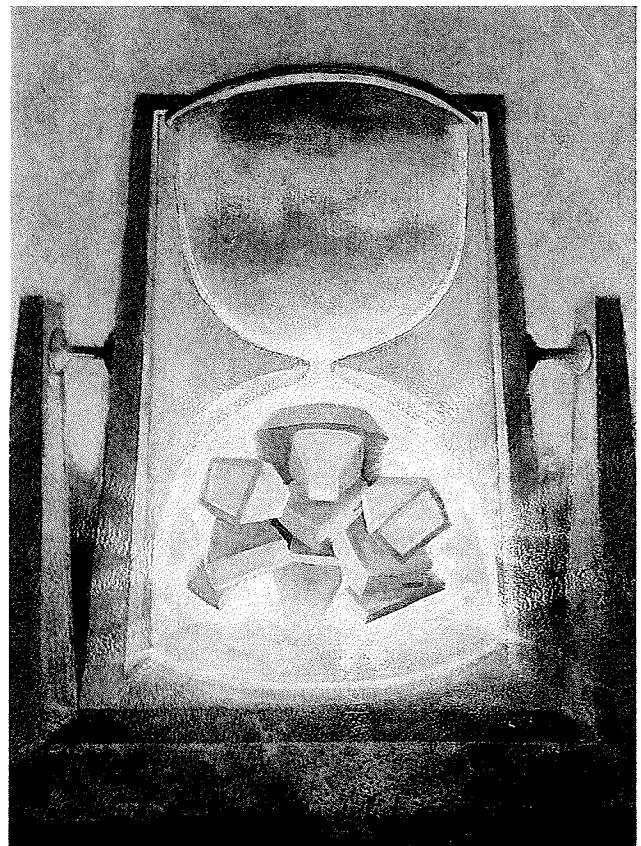
Of course, these terms are at the same time extremely important because they underscore a real technological event: large-scale, expensive mainframe platforms are running out of time as new technologies emerge to take their place. These new technologies are, for the most part, more efficient, user friendly, and cost effective.

What Is Rightsizing?

Rightsizing, by most accounts, grew out of the term *downsizing* and signifies the migration of information systems (IS) from a mainframe platform to a more efficient architecture that addresses specific business requirements. Rightsizing also envelops the idea of migrating from a standalone PC environment or file-based network to a client-server or distributed architecture. Michael Lans, manager of applied information technology for Brunswick Corporation and publisher of *NetWare Connection,* defines rightsizing best when he says, "rightsizing to me is the fitting of appropriate-sized hardware, software, and staff to meet a company's IS needs. The goal is to balance financial concerns with the efficiency and flexibility of the target system. . . . Typically, the key technology is client-server."

What you call this trend to migrate depends on whom you talk to. *Rightsizing*, some would argue, does not have the negative baggage associated with the word *downsizing*, which a lot of people associate with layoffs of both management and technical IS staff. However, because rightsizing appears to be a close kin to downsizing and because the various terms associated with this trend are only, for the most part, a matter of semantics, this article assumes these words are interchangeable.

A Climate for Change

Several technologies that arose in the 1980s paved the way for the migration from mainframes to PC networks. Micro-mainframe links, or cards, that allowed PCs to act as dumb terminals, and PC-based mainframe-language compilers that allowed you to write mainframe applications on the PC were just a few. Dr. George Schussel, founder of 11-year-old Digital Consulting Inc., picked up on these and other indicators and, in 1989, initiated the biannual Downsizing Expo, the first and only trade show dedicated to this business issue.

"Porting applications from a mainframe to a PC is a very natural trend," says Schussel, who noticed in the latter part of the 1980s that a few avant-garde firms were porting applications from the mainframe to the PC environment. He recalled a few of these rare cases of rightsizing: "One that I visited that I found interesting was Echlin Manufacturing, out of Connecticut. They had rebuilt all of their corporate systems for a PC LAN. It saved a huge amount of budget money. You began to hear about rare kinds of companies doing things like that; it was stunning in each case. [For example,] Turner Construction, out of New York City, got rid of all their mainframes and minis and ran their entire company on 3,000 PCs. People began to realize you can do it."

Schussel cites the advent of client-server computing, which was introduced by the Sybase Corporation,

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IS IT TIME FOR YOUR COMPANY TO RIGHTSIZE?

Should you consider rightsizing? Begin by asking yourself these questions:

1. Do users complain about the current system? Do they ask for new technologies and applications?
2. Is the system unresponsive to users' requests for information?
3. Does the system act erratically, crash, and lose or corrupt data?
4. Do you have an unacceptable programming backlog?
5. Have your business needs changed to the point where the system no longer meets your requirements?
6. Are you looking for a more cost-effective information system?
7. Are user departments secretly planning to install their own systems and applications?
8. Do customers complain about your company's ability to respond to various types of requests?

If you answered yes to any of these questions, it's a good indication that you should consider rightsizing your system. Of course, the success or failure of your rightsizing effort will depend on how well it's managed. This encompasses everything from how well you redesign your business and implement technologies to improve its efficiency, to how well you plan the system and train personnel.

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as fundamental to the climate for change. While client-server computing was slow to get off the ground due to the lack of desktop standards, the emergence of Windows 3.0 changed all that. "When Windows 3.0 hit the market, it became clear to me instantly. . . . I went out on the lecture circuit and began telling people the battle is over; Windows is the standard. I got a lot of criticism back in 1990 and 1991 for saying that . . . but now no one disputes it." The introduction of Windows 3.0, says Schussel, was an incentive for tools manufacturers that make high-level application development languages to develop tools for building client-side applications for Windows.

According to Schussel, today all of the pieces are in place to effectively rightsize: high-level graphical tools; network managers, such as NetWare; and proficient database tools, such as Sybase and Oracle. He estimates that a survey of Fortune 500 companies would reveal that 97 percent have a downsizing or client-server project in progress. "Not

everyone has migrated completely or significantly, but everyone is testing and building and checking it out to see how it works," he says.

Cost: The Critical Success Factor

It's evident that rightsizing is a response to the huge costs associated with large-scale mainframe systems. In a mainframe environment, equipment, application development, and the people associated with maintaining the system all serve to lower a company's all-important bottom line. Therefore, while there are many reasons why an enterprise rightsizes its system, chief among them is cost. In fact, the benefits of rightsizing—including efficiency, system simplicity and flexibility, and increased user access to data— all contribute to an overall cost savings for an enterprise that chooses to migrate.

Schussel, who has performed many case studies on the subject, suggests that companies can realize budgetary savings of up to 50 percent. While the fact that the hardware and software of new technologies provide a lot of the

RIGHTSIZING PAINS AND PRACTICAL ADVICE

Although rightsizing may appear to be the panacea for your business ills, rightsizing also comes with its own set of ailments. Systems built with new technologies are relatively inexpensive and can save your company money in the long run, but they come complete with their own unique problems. When planning your rightsizing strategy, remember the following:

Reengineering

Streamline your company's processes and organization before designing a new system. A system built for a business that doesn't run efficiently is not a rightsized system. Ultimately, automating a poorly designed business process only yields a poorly implemented computer application.

Training

Whether you're migrating to a client-server environment or just creating one from scratch, you'll need trained, skilled staff to implement and maintain the system. Users will need training, too. The upfront money you spend to get your staff and users up to speed will save you money down the line.

Integration

The sheer number and diversity of available technologies can create an integration headache. Whether you're considering a product or a protocol, don't believe everything you hear and read. Nothing takes the place of first-hand capabilities testing.

Standards

Proprietary hardware and software are typically more expensive than the open systems products available today. This off-the-shelf atmosphere may lure you into thinking that you can buy a little bit of everything and hook it all together. This can have the same effect as taking a lot of different pills; sometimes they just don't go well together. Create platform standards and stick with them.

Portability

Understand what it takes to port an application from the mainframe to the PC network environment before putting your mainframe altogether out to pasture. While most applications can be ported, there may be one or two you'll want to run at mainframe level.

cost savings, he believes the largest savings comes from a reduction in IS staff. "It simply takes fewer people to support and build downsized systems than mainframe systems," he says.

At the same time, don't expect your bottom line to rise too quickly. By all indications, you'll need to retrain what's left of your IS staff, which takes time and entails a slow migration. This makes those cost savings less apparent in the short term. However, long-term, end-user training costs will be significantly reduced as you port applications and as users learn to access data through a standard, graphical desktop interface.

Managing the Rightsizing Effort

From my experience, I venture to say that failure in most endeavors is due to poor management; therefore, if a company doesn't realize the wonderful cost savings anticipated,

poor management is most likely the culprit. When you set out to rightsize your information system, my research indicates a few common-sense guidelines should be followed:

Plan and Document. Failing to plan your rightsizing effort can have catastrophic results. There's a lot of talk about reengineering, and it appears to be a vital aspect of successful rightsizing efforts. Reengineering entails evaluating your company to ensure its organization and processes are meeting strategic business objectives. Only after you've taken a look at the business-oriented aspects of rightsizing can you choose a technological platform that best suits your company's needs. From there, you can lay out an A-to-Z strategy to get from where you are to where you want to be. Documenting the strategy, as well as the before-and-after designs, and all the changes in between is crucial to the success of your overall plan.

Take Baby Steps and Keep Your Eyes Open. If your plan includes migrating from the mainframe environment to a PC network, you'll want to port a few applications at first. These initial attempts should not involve mission-critical applications. If your plan includes tying a variety of hardware together—PCs, minicomputers, servers, mainframes— be sure to implement technologies that will allow them to communicate effectively with each other. No matter what, beware of the bleeding-edge technology that promises the world. Check things out; get references.

Know Thyself. Because repeated mistakes can be costly, experience is essential. If you or your IS staff is not familiar or comfortable with porting applications or implementing new

technologies, seek advice from those who are experts in these areas. An alternative is to provide your IS staff with the training required to successfully implement the new design. This will provide the additional benefit of having trained, skilled in-house staff to maintain the new system, and to alter it if necessary. Often, a combination of outsourcing and training provides the best result.

Remember the Users. Rightsizing is all about efficiency. If you want your business to run more efficiently, your system must provide users with prompt, accurate data and an easy method to use that data. This means that users must be able to operate in the new environment. Therefore, it's wise to get the users involved. Ask them what they need to do their jobs and act on their opinions. Keep in mind that if you involve the users, they will more likely embrace the scary environment of change. In addition, as with the IS staff, training is essential for users. If you spend the time and money to train users, they will more readily accept and use the system to its fullest, which again translates into long-term savings.

The Technologies of Rightsizing

There are many areas you need to look at when planning your rightsized system. While the technologies available today are too numerous to mention in detail, there are some trends in the industry worth noting:

The Server. Since Novell owns roughly 60 percent of the PC network market, a good portion of companies will include Novell products in their rightsizing strategies. And Novell's purchase of UNIX System Laboratories (USL) demonstrates Novell's commitment to supporting the world of interconnectivity on a much larger scale. According to Schussel, the USL purchase, in conjunction with the introduction of Directory Services (a feature of NetWare 4.0) and various NetWare Loadable Modules (NLMs), will

"help Novell maintain its dominance on the server."

The Desktop. OS/2, UNIX, and Windows all own their fair share of the current desktop pie, and it's not too clear which will get the biggest slice in the future.

Database Techniques. The technique you use to port applications from the mainframe to the client-server environment or to create custom business applications from scratch can make or break your IS budget. In fact, one of the chief complaints about writing applications for the mainframe environment is, quite simply, the time it takes. Because the database is the heart of most serious business applications, you'll want to choose easy-to-use application development tools to write programs to access this information.

Various fourth-generation languages (4GLs), case tools, and code generators are available from companies such as Sybase, Oracle, and Knowledgeware to help you port and create applications quickly and easily. In addition, while not everyone has hopped on the object-oriented bandwagon, it should prove to be a quick and effective application development method.

Outsourcing: Where to Go for Help

According to Bruce Berntson, a Salt Lake City-based data processing and systems integration consultant who has worked in the industry for 14 years, outsourcing is used to "augment the current IS staff in both maintaining the old and developing the new systems." While it's unwise for you to completely outsource your rightsizing effort, consultants, systems integrators, and value-added resellers (VARs) can offer insight and specialized services. Here is a rundown of the services each provide:

Consultants. You should consider finding a consultant if you need advice about how your business should operate or about which technologies to implement. While

there are consultants that specialize in each of these areas, rightsizing practically mandates that your consultant have experience in both areas. Consultants' fees can be expensive, so choose wisely.

Systems Integrators. When you need to integrate a variety of components, systems integrators can provide valuable hardware integration and application development expertise. A systems integrator often functions as a VAR, providing equipment from many vendors at lower prices.

VARs. VARs sell products from a variety of vendors and often provide limited services such as training, installation, and maintenance. Only the most experienced IS staff will want to use VARs.

The outsourcing option you choose will depend on how much in-house expertise exists. In addition, Berntson touts the benefits of joining your IS staff and outsource providers "at the hip," adding that "outsourcing money is often well spent in terms of the 'knowledge transfer' that takes place." Whichever way you go, cautions Berntson, make sure you develop comprehensive requirements and closely monitor the provider's progress.

Conclusion

With the abundance of new technologies and the various ways to implement them, rightsizing can be a complex and intimidating process. In terms of how efficiently your business operates, however, it's probably destined to be rightsized. The question of "when?" becomes one of realizing that there aren't many grains of sand left in your old system; inevitably, the hour glass must be turned.

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