HEADLINE: DEPT. 56 SUES ARTHUR ANDERSEN FOR $6 BILLION; RETAILER SAYS BOTCHED PROJECT 'VIRTUALLY DESTROYED' COMPANY

BYLINE: Janet Moore; Staff Writer

Department 56 Inc. has filed a $6 billion lawsuit against Arthur Andersen Worldwide, claiming the consulting firm badly bungled its advice when it planned the overhaul of the Department 56 computer system in 1999. The Eden Prairie-based giftware company alleges that as a result of Andersen's counsel, it suffered substantial financial losses, reduced sales and a $470 million decline in market capitalization.

The 69-page complaint, filed Thursday in Maryland Circuit Court in Baltimore, includes allegations of fraud, negligence, breach of contract and civil conspiracy. "It was our worst nightmare, utter chaos," Al Sussman, senior vice president and chief information officer for Department 56, said in an interview Thursday.

A prepared statement issued Thursday by Chicago-based Arthur Andersen said the firm's "engagement team was fully qualified to perform the work and did so in a professional manner." The Andersen statement charged that Thursday's suit was in retaliation for a lawsuit Arthur Andersen filed five months ago in Hennepin County District Court against Department 56 for nonpayment.

Department 56 claims that it was an unwitting guinea pig as Arthur Andersen attempted to build its worldwide consulting business. "We thought we were hiring the best," David Weiser, the company's senior vice president and general counsel, said in an interview.

The situation began in 1995, when Department 56 sought to replace its aging computer system, which tracks orders and shipments for its vast customer base of some 19,000 dealers. The company, once a division of Minneapolis-based Bachman's, is perhaps best known for its Villages collectibles and Snowbabies figurines, which are sold in gift, specialty and department stores.

When it signed the contract with Department 56, Arthur Andersen was embroiled in a bitter corporate dispute with its sister company, Andersen Consulting. The two had been part of the same firm until 1989, when an agreement was reached to split Arthur Andersen's auditors and consultants. The auditors retained the Arthur Andersen name, while the consulting arm became Andersen Consulting, now Accenture. Bickering between the two escalated in 1994 when Arthur Andersen created its own consulting firm.

The lawsuit says that with $250 million in annual sales, Department 56 was far too big a client for Arthur Andersen, which was restricted by its corporate parent from taking on clients with more than $175 million in yearly revenue. But the suit claims that Arthur Andersen "could not contain its jealousy" as it watched Andersen Consulting grow into a leading information systems consultant that garnered "enormous" revenues.

Arthur Andersen assured Department 56 officials that the new computer system would cost no more than $3.3 million. But company officials and the lawsuit said the cost ultimately ballooned to $14 million, largely because of the inexperience of the Andersen consultants.

Sussman said the new computer system's shortcomings were felt immediately. Orders could not be

filled, or were lost. Shipments were not billed, or bills were duplicated. Customers could not determine how much they owed so they failed to pay their bills, he said. "Department 56 was so totally disrupted that Department 56 was virtually destroyed," the complaint states.

The company spent an additional $4 million to hire other consultants to fix the problem, and had to offer unhappy dealers a 5 percent discount in an attempt to retain their business. The discount alone cost the company $8 million in revenue, the complaint states. In addition, the company was forced to take extraordinary charges to earnings of $6 million and $12 million for bad debt and customer claims reserves. The company's stock has plummeted 24 percent year-to-date.

Sussman said even now the system is not as effective as the one it replaced. "We're now three to four years behind where we thought we'd be in 2001," he said, "We spent almost all of 1999 and part of 2000 dealing with these problems when we could have been growing and acquiring other companies."

The suit was filed in Maryland because Arthur Andersen's chief executive officer maintains a residence there and Department 56's law firm, Snyder, Weiner, Weltchek, Jacobs, Slutkin & Lodowski, is based in Baltimore. Last year, the law firm negotiated a $185 million settlement from Ernst & Young in connection with that consulting firm's mishandling of apparel retailer Merry-Go-Round's restructuring.

Article #2:

HEADLINE: E-BUSINESS: MEETING THE TECHNOLOGY CHALLENGE;
WITH BIG SOFTWARE PROJECTS, FIRMS FIND HASTE MAKES WASTE

BY: CHARLES PILLER, TIMES STAFF WRITER

When Nike Inc. recently saw that it was going to have a terrible quarter, the apparel giant seemed to disavow its famous "Just do it" marketing slogan. Instead, Nike just blamed its software. The dramatic earnings shortfall was largely due to the failure of its costly new "supply chain" software, the company said.

When it works, such software comprehensively manages orders, manufacturing and inventory, and sends the final product to market. It tracks raw materials and communicates with suppliers with ever-increasing efficiency, often eliminating hundreds of steps in the traditional process.

But Nike's move to upgrade such processes has been a nightmare. Too many slow-selling styles went to the wrong places; the company produced 5 million pairs of spring shoe styles for which it had no orders. Meanwhile, popular models like Air Force One were in short supply or delivered late to impatient retailers.

Pointing the finger at the software's maker, Dallas-based I2 Technologies Inc., Nike Chief Executive Phil Knight reportedly quipped to analysts, "This is what we get for $ 400 million?" Both Nike and I2 declined to specify what went wrong. But, in general terms, their experience provides a valuable lesson in e-business: Moving too fast and throwing caution aside can overwhelm even the best technology.

Nike was willing to invest such a large sum on supply chain software because the potential for savings

is so huge. Networking equipment maker Cisco Systems claims annual savings of nearly $ 700 million after an investment of $ 170 million over five years. Much of the savings derives from shorter time to market for Cisco products.

Nike's recent missteps made the company more determined than ever to implement the sophisticated supply chain software system it had envisioned.

But Knight acknowledged last month that the Beaverton, Ore.-based company has a long way to go.

"I've sat here several times over the last three or four years trying to answer the question, 'Is that light at the end of the tunnel?' " he said. "Actually, the end of the tunnel is an oncoming freight train, and we're sort of there again today."

The Nike episode may have sounded familiar to candy maker Hershey Foods Corp. The company pushed to finish a four-year software project in 30 months, resulting in disastrous product delays just before--you guessed it--Halloween. Profit dropped correspondingly.

Who's to blame for such debacles? Such situations are so complex, said analyst Eric Upin of the investment bank Robertson Stephens, that "it's like trying to analyze how a marriage failed."

Public disputes between a software vendor and a large client are rare. But just as divorce hits as many as half of all marriages, serious problems in the implementation of supply chain software are typical.

"As many as 50% of all major large-company software programs have major problems--they're either significantly delayed, significantly over budget or have significant functional problems; they operate too slowly or don't do what they are supposed to do," Upin said.

And those are the ones that ultimately work.

"My guess is about half of these projects fail. Corporations scrap the software and start over," said Charles Phillips, an analyst with Morgan Stanley Dean Witter.

Nike began its project a year ago and recently acknowledged that it will take three more years to come to fruition. Like Hershey, the shoe giant apparently fell into the trap of pushing too much complexity too quickly--before its personnel or factories or shippers were ready for the change.

Why such a phenomenal failure rate--intolerable for most other business productivity efforts? Start with buggy software.

Supply chain applications for major corporations normally start at $ 1 million, plus customization, hardware and maintenance fees that can push the total into the stratosphere, as Nike painfully discovered. It would stand to reason that such huge sums would buy fail-safe reliability.

Yet the opposite is often true. Complexity breeds mistakes, according to Eric J. Bowden, editor of BugNet, an online publication that tracks software errors. "It's absolutely impossible to write a piece of code that doesn't have a bug in it," he said. BugNet estimates that on average, for every thousand lines of source code--the digital instructions that constitute every software program--there is one bug. Supply chain software has millions of lines of code.

That means thousands of bugs. All it takes is one to divert 150,000 pairs of Air Garnetts to Indiana when Hoosier teens wanted Air Jordans.

And those programs tend to be far buggier than a typical personal computing application. Part of the reason is that they interact with a range of other software programs--from accounting to ordering to database tools--all of which have their own bugs. The interactive effects can cause calamitous errors and incompatibilities, Bowden said.

"How many Nintendo 64 games do you see crash?" he asked. Such games are extraordinarily reliable because they operate a single device and don't interact with other software programs. That device is in millions of homes, so when a bug arises, a multitude of users are likely to run across it and report it.

Supply chain products are the exact opposite: Each is customized, and only a handful of users may encounter a given bug. When they do, it can shut down their operation. And even well-designed programs work only when they are supplied with the right data--a challenge when dealing with the wide range of computers and software that most corporations have come to rely on over decades. "Garbage in, garbage out," the saying goes.

Yet the benefits of doing things right can be so compelling that most companies forge ahead despite such pitfalls.

Cisco operates one of the most sophisticated supply chain operations, analysts say. In the last few years it has radically slashed production cycles and product inventory--a move the company credits as a key factor in its rapid growth. Cisco's software also allows the company to remotely monitor contract manufacturers' production lines.

"We can essentially test products to our specifications and requirements without . . . having employees on-site," said Franklin Grosvenor, Cisco's director of supply chain strategy. The savings to Cisco: more than $ 100 million annually--just for the testing portion of their supply chain costs.

Experts also point to Dell Computer Corp. as a master of the supply chain. Notwithstanding Nike's problems, the company happily uses I2 software. By closely linking suppliers to its factories, Dell has reduced PC inventories to less than five days and says it will gain a 500% return on its investment in supply chain technology over the next three years.

"In our factories we measure inventory in hours; our latest factory doesn't have a warehouse in it," said Dick Hunter, Dell's vice president for supply chain management. Goods are delivered straight to production lines every two hours.

Such success stories usually follow bitter experience based on the misguided belief that technology will solve problems overnight. As Nike and Hershey discovered to their dismay, pushing the system too fast can spell disaster.

And without strong managers who present a very clear mission for the software, every department tries to add new features. "The project becomes building Rome in a day," Upin said.

Because such software packages generally involve investments of many millions of dollars, the buyers are senior executives who lack the firsthand technical expertise to evaluate a vendor's claims. Operating in a highly competitive marketplace, they often fall prey to overconfident software

representatives eager to make a lucrative sale. Phillips compares the process to a multimillion dollar used-car sale.

And companies may neglect the human challenges that even the best technology creates. "System implementation is very painful because it often changes the way people work and it often changes the power between departments," Upin said. He likened the process to necessary surgery often performed without anesthesia.

Dell's Hunter agrees. His company responds with "a maniacal focus on re-engineering processes." "We spent a lot of time on what we call 'change management.' We start training people way in advance of the actual go-live date," Hunter said.

For its part, Nike said it has found buyers for 84% of its software-induced overstock. And it's pushing forward as rapidly as possible to smooth out the problems.

Managed well or poorly, no modern company can avoid automating the old processes for long, analysts say. Corporations seem to agree. The supply chain software market will hit $ 7.8 billion this year, according to AMR Research, a market research company.

This would suggest that companies have come to view complex supply chain software in the same light as the old saw about democracy--the worst system, excluding all the others that have been tried.

HEADLINE: TAMING THE TECHNO BEAST

BYLINE: Alan Hall & Peter Coy in New York

HIGHLIGHT: Technology is running wild. Learn to manage change, or you'll get eaten alive

BODY:
DID YOU HEAR THE ONE about the entrepreneur who thought technology would save his company? Now, there's a joke guaranteed to liven up any gathering of small-business owners. Sure, technology can be like Lassie -- a faithful companion who will rush to the rescue if you get into trouble. But make a wrong decision, and it can turn into a snarling beast that could tear your company apart.

For virtually every small-business owner today, the critical issue of changing technology boils down to one impossibly complex question: how to manage it coherently. Everyone knows you can't stand still; change is an imperative for small companies. Their spending on technology alone is evidence of that, soaring from $ 67 billion in 1995 to $ 85 billion last year. A company with 20 to 49 employees that wants to stay up to date will spend an average $ 88,000 a year on tech, and that's expected to rise at double-digit rates this year.

But change is fraught with risk. Move too soon, and you could end up wasting time and money on glitchy new software or a customized system that's poorly designed. Move too late, and you'll be left behind by your customers, disparaged by your employees, and stomped by your rivals' efficiencies.

That's just part of the conundrum. Industry hype and rosy hopes for expansion can induce

entrepreneurs to buy systems they can't afford to maintain. Consultants -- either incompetent or overly focused on technology for its own sake -- can lead owners into a digital tar pit. And this all takes place in a world that last year saw announcements of about 4,000 new business technology products -- 250 of them targeting small companies. You couldn't possibly buy them all or, if you did, have time to figure out how they work.

In short, managing change is about as easy as dancing on a spinning top.

Even companies that should be tech-savvy can lose their balance. Consider eLabor.com, a Camarillo (Calif.) software startup that sells a workforce management tool. Before its Web site finally got up and running, some parts had to be reconstructed two or three times. After investing more than $ 500,000 and bringing in a staff of experts, the system collapsed completely four months into the project. "The 'experts' asked the wrong questions of the wrong people, and we gave them the wrong answers," admits President Michael Edell. "It was a predictable failure but one that should have failed sooner and at less expense."

And what of those who are less surefooted? A miscalculation can be fatal. Consultant Geoffrey D. Knapp, CEO of CAM Commerce Solutions, a Fountain Valley (Calif.) provider of computer systems for retailers, recalls an entrepreneur in San Francisco who several years ago built a single store into a chain of five gift shops called Headlines. He had big plans for expansion, so he switched to a complete retailing computer system that controlled inventory, purchasing, point of sale, merchandising, and personnel. Trouble was, the system was designed for a much larger operation, and the cost of maintaining it was a financial drain. Instead of expanding, the company went bankrupt.

No wonder a Gartner Group Inc. study found top managers rank handling technology among their three leading concerns. Similarly, a new study due out this month from AMI-Partners Inc. found signs of a nascent backlash against the high costs and hyperbolic claims for Web-based services.

DEVELOPING A PHILOSOPHY Hope as you might, there are no cookie-cutter solutions to picking the right technology. Instead, it boils down to philosophy -- a matter of mind-set. Those who do it well plan change to advance their business goals. They understand that technology is a tool, not a fix, and that it needs to be managed with care. They move at the right time by keeping an ear to the ground. They make sure their decisions straddle the line between what's next and what's proven. Above all, they realize that it won't always be easy. "If there is one thing you can count on with technology, it is failure, frustration, and delay," says Gary S. Lynn, a professor of technology management at Stevens Institute of Technology in Hoboken, N.J.

Surely the first pitfall is inaction. "Sustainers" who hold on too long will see the warning signs, if they look. As maintenance costs rise, their old dinosaur starts to chew through their financial resources. Workflow slows, customer support becomes harder to get, key employees move to better jobs. Customers will start to complain that their systems are incompatible -- and "will eventually vote with their feet," says William Schiano, a professor of information systems at Bentley College in Waltham, Mass. It may seem like fuzzy thinking, but don't underestimate the perception of customers and employees. The digital economy has created a powerful desire among cutting-edge people to use the "next best thing that comes along," says Andrew Banks, CEO of Mid-America Consulting Group Inc. in Beachwood, Ohio.

If lagging is a liability, so is rushing in. Granted, something better and cheaper is always being introduced. But the first users usually end up paying top dollar for the dubious privilege of testing

products that are often unproven, and ultimately unsuccessful. (Remember network computing, killed off in less than a year by powerful, low-cost PCs? Remember Betamax?) Frequently, business owners underestimate the time, complexity, and cost of integrating a new system into the company. Technical support may be scarce, customers may not understand it, and their old systems may not communicate with it. "Those that are 'first on the block' are also going to be the ones who suffer the bugs, glitches, and security loopholes," warns Stan Hunter Kranc at Wonderworks Publishing, a technology consulting firm in State College, Pa.

The solution: Don't be an early adopter. Instead, profit from pioneers' mistakes. "If you can live with it, being a second mover is more cost-effective," says Cynthia Hollen, CEO of Knowledge Strategies Inc., a New York e-commerce strategy consulting firm. It's like playing poker: The goal is to remain in the game as long as possible, anteing up only what's necessary to see new cards. That means waiting for reviews to appear in mainstream, nontech publications, thinking twice if a new product is still so scarce that few vendors stock it, and being wary of any software release called "1.0."

A TECHNOLOGY PLAN The best players have a clear strategic vision for their company. In fact, a "technology plan" should be an integral part of any business plan. Ask first what business goal you want technology to achieve. Consider also the cost and potential return -- the benefit to both employees and customers. "Technology features should not drive the decision," warns Larry Shoup, president of Janus Technologies Inc. in Pittsburgh. Just because accounting can now be done online for free doesn't mean you should ditch Quickbooks, a program that everyone, including your accountant, understands. When you're toting up the costs and benefits, consider the benefit and cost to employees, partners, and customers.

With that in mind, shorten your horizon. Look for simple-to-learn products that fulfill a tangible, near-term goal, not a long-term, vaguely defined gain in efficiency. Why? Because in a world where technology life cycles are so short, plans spanning 5 to 10 years will be useless, and so will products you plan to use that long. A horizon of 18 to 24 months makes more sense.

What makes for a bold plan? Your best bets will likely involve heavy investment in cutting-edge technology that lets you offer customers an important new service ahead of the competition. That's what Ozark Motor Lines Inc., a trucking company in Memphis, did recently, after analyzing how it could use the Internet. In the past, like most shippers, customer-service staff at Ozark spent huge amounts of time on the phone telling clients where their loads were. Now, customers can track shipments by themselves on the company's Web site, which provides continuous global-positioning system data transmitted from each truck's cab. "By being on the leading edge, Ozark tied itself more closely to its customers and won the opportunity to poach customers from competitors who still worked the phones," says Billy Hollis, general manager of Oakwood Systems Group Inc. in Nashville, which advised Ozark.

WHOM CAN YOU TRUST? If you can't afford an in-house tech manager, consultants can be helpful. Choices range from independents who charge by the hour -- figure on about $ 50 to $ 100 -- or local tech merchants known in the trade as resellers. Either way, be wary of their recommendations, which sometimes are determined by which manufacturer "educated" or marketed to them most aggressively. Insist they lay out alternatives and detail the rationale for their preference. And don't be afraid to challenge their premises and reasoning, regardless of your knowledge. "The consultant gets paid, no matter what happens, and usually before anything bad happens," notes Richard Luettgen, a consultant at Technology & Business Integrators in Woodcliff Lake, N.J.

With or without one, it's almost a given that delays will occur, no matter how clear the strategic imperative. You'll have to include that in your plan. Consider Bernard Food Industries Inc., a 53-year-old family-held purveyor of more than 1,500 sugar-free, low-fat, and low-calorie food products. Traditionally, the company sold primarily to hospitals, nursing homes, and other institutions. In 1996, Steve Bernard, the founder's son, decided to tap the consumer market, which brought in only $ 100,000 of the Evanston (Ill.) company's revenues of $ 18 million to $ 19 million.

How to reach consumers? Bernard looked into the future and saw the Web. Just a handful of companies were marketing on the Net at the time, but Bernard wasn't deterred. The first effort, by a Chicago area Web development and hosting service, was completed in November, 1996, but the entire project was lost when that company folded. Next, Bernard turned to a telecom giant that promised the moon but outsourced the job to a subcontractor that couldn't build the site. Finally, the third developer he hired finished the job in 1998, two years off schedule.

Despite the setbacks, Bernard has no regrets. The site, diet-shop.com, has quintupled retail sales, to about $ 500,000, and is on track to do $ 1 million in 2000. "We didn't turn to the Web because other people were doing it but because we knew where we wanted our business to go," he says.

THE HUMAN FACTOR People count. Don't forget to include employees' attitudes in your planning -- something entrepreneurs all too often fail to do. "Resistance is the main reason why major technology projects die," says Rick Maurer, author of Beyond the Wall of Resistance (Bard Press, 1996). People often fear they will lose control over their work or that change will "add time and hassle to their jobs -- or worse, that they might even lose their jobs," says Maurer.

Only training will persuade them otherwise -- and get them to use the technology effectively. "Without adequate training and support, all the technology in the world is basically worthless," says John Memar, president of Medac Inc., an anesthesiology billing-and-practice management specialist in Augusta, Ga.

Outsourcing can also help blunt the impact of change on employees. "Only technologies that are mission-critical and deal with sensitive, highly confidential information should be managed in-house," argues Mary Alice Lawless, CEO of ClickUpdate in Morristown, N.J., an "application service provider," or ASP, that provides companies with a system for managing and updating catalogs and sales materials over the Web. Another benefit of a well-run ASP is that it helps reduce risk. A small company can outsource key software -- from human resources to accounting, marketing, and supply-chain management -- and access it through the Web. Without having to own the infrastructure, the total cost of ownership is the monthly fee. "If you make shoes, then be the best shoemaker and leave the technology to the technology people," says Michael Edell of eLabor.com.

SAVE, DON'T SKIMP Still, there's gear that every company needs, from desktop computers and modems to servers and telecom equipment. You may not want to own that either. To control costs and keep up with technology, small companies are turning to leasing. By leasing, you get state-of-the-art technology, paid for with manageable, predictable monthly financing, plus the opportunity to trade it in for the next generation at regular intervals. The cost after taxes is comparable to buying, and you're able to preserve your capital for purchases that might grow instead of depreciate from Day One.

If you do buy, it's always tempting to wait for prices to drop. But experts advise focusing on value when buying expensive systems (as opposed to PCs): While waiting, you may be putting off changes vital to survival. "The money you think you might be saving will not come close to what you could

lose," says Bahram Yusefzadeh, who heads Phoenix International, a Heathrow (Fla.) company that specializes in software for small community banks. "Jump in now, close your eyes, and don't worry about pricing," advises Jeff Multz, who founded Emerging Market Technologies Inc. in Atlanta when he was in college in 1986 and built it into a $ 2 million company. "If you wait, you'll always be waiting."

Even in simple matters, skimping can wreak havoc. Lois Melbourne of TimeVision Inc., an Irving (Tex.) startup that produces Web-based organizational charts, recalls how a key secretary in the company was given the oldest computer in the office, with puny memory, even though her work required keeping multiple applications open. The machine crashed constantly. The woman held her tongue until she was "ready to throw the computer out the window," says Melbourne. "All of this for a few hundred dollars' worth of RAM."

THE MORE THINGS CHANGE ... Once you have it all figured out, what do you do next? Start over again. Listen to your employees, particularly salespeople in touch with customers and your customers themselves. "Internal people will complain that their computers keep crashing, and external people will say you aren't moving quickly enough for their needs," says consultant and author Marc Kramer of Kramer Communications in Downingtown, Pa. Also, keep a jaundiced eye on competitors. Ask yourself if they're doing a better job, whether tech plays a role, and what they are using.

So how does a company tame the techno beast? With attitude. If you see technology as a cost of doing business, you may be doomed to failure. If you view it as your Holy Grail, you may have lost sight of what really matters. If you pick your way through the bewildering options and plan strategically, you just might end up with a loyal ally that will be eating out of your hand.

Avoiding the Tech Trap

Dread the thought of changing your technology? Here's how to ease the pain.

PLAN

Technology planning is as important as business strategic planning. Incorporate technology into your business plans, stay current with the latest products, and be prepared to take advantage of the latest developments. Remember, flexibility is essential.

EVALUATE

The number of options can be bewildering. Consider only those that best fulfill a strategic vision. Choose technology that improves competitiveness, cuts costs, or ties you more closely to your customers. Consider outsourcing anything not essential to your core business.

MANAGE

Make sure employees are on board. Resistance to change from lack of training or support -- or fear that jobs will be lost -- is the main cause of failure. Be certain that you have the resources on hand to implement change -- and be wary of hidden costs. Make sure that the new technology integrates smoothly with your other systems and those of your customers.

MONITOR

The need to change again will come sooner than you think. Stay abreast of new developments and keep a watchful eye on competitors. Listen to your employees and your customers. It's time to make a move when your strategy changes or when technology becomes limiting or too expensive to maintain.

HEADLINE: THE DIGITAL AGE STORMS THE CORNER OFFICE;
INFO TECH IS SO CRUCIAL TO BUSINESS OPERATIONS TODAY -- AND SO EXPENSIVE -- THAT CEOS HAVE NO CHOICE BUT TO UNDERSTAND IT

BYLINE: Eric Wahlgren in New York

Jane Blankenship learned long ago that she had better understand technology if she wanted to get to the top and stay there. As chief operating officer at Forum Corp. in the mid-1980s -- before the personal computer was as common as a phone -- she was flung into the equivalent of a Marxism-vs.-capitalism debate when she had to decide whether to outfit the company with Apple Macs or IBM-style PCs. The CEO and board of the executive-education company -- all techno-innocents -- were considering going with Apple after being lobbied heavily by Mac evangelists who liked its user-friendliness.

Blankenship did her homework, however, and discovered that most of Boston-based Forum's customers were going the IBM route, since IBM stressed a platform and software that were best for corporate uses. "This wasn't about kids in school," says Blankenship, who is now chief executive of InsightShare, which sells customer relationship management (CRM) software and services. "We needed a business-computing platform." In the end, Forum avoided what Blankenship says would have been a costly investment in Macs that it would eventually have had to replace with PCs.

Fast-forward 15 years, and one thing has changed for CEOs: Making good technology decisions is more crucial than ever. In extreme cases, it can mean the difference between record profits and Chapter 11. For example, CEO Blankenship recently decided to delay development of InsightShare's next version of CRM software. The cost of rolling out a new product in a shaky economy could threaten the company's survival, she reasoned, especially since her existing product continues to generate interest.

COMFORT LEVEL. Blankenship credits her familiarity with technology for helping her make the tough call. Otherwise, she might have throttled ahead thanks to the "keep moving forward" mantra she learned from her years as a product manager. "The only way you can make decisions quickly and confidently is to have a certain level of knowledge about technology," says Blankenship. "You can't be a CEO today and not know what is going on."

Like it or not, the 21st century will be the era of the tech-literate CEO. Even nontech companies rely increasingly on information technology (IT) to make products, get them to market, and service customers, says Steve Berez, who manages the IT management practice for global consulting firm Bain & Co. Indeed, because IT has become so intertwined with day-to-day business operations, damage from even a small computer foul-up can be colossal.

Moreover, technology spending has become too big a part of most corporate budgets for CEOs to ignore. In fact, IT now represents more than 50% of all business equipment spending vs. less than 20% some 25 years ago, according to Berez. "CEOs often don't understand enough about technology," he says. "We encourage CEOs to think about [IT spending] as if it were a major investment in a factory or the purchase of a business."

CEO's are "shirking their responsibility" if they aren't spending at least 20% of their time on IT issues, declares Michael Earl, a professor of information management at the London Business School and the director of the LBS Centre for the Network Economy. That's not a bad rule. Software purchases for CRM, supply-chain management, and enterprise resource planning (ERP) -- which integrates all departments and functions of a company in a single system -- can cost hundreds of millions of dollars. And that's before the cost of training employees to use the stuff. A CEO wouldn't dream of spending

that amount on an acquisition without lots of due diligence. And yet many don't give the same attention to IT projects, experts say.

REASON FOR FAILURE. In fact, insufficient CEO knowledge of IT can doom key projects, according to experts who study the field. "Technology [alone] has nothing to do with project failure," says Jim Johnson, chairman of Standish Group, an IT consultancy in West Yarmouth, Mass. Executive follow-through -- or more precisely, the lack of it -- is the No. 1 reason IT projects fail, experts say.

In no small part, that's because "major IT projects require radical change in an organization," notes Bain's Berez -- including changes in both job functions and time-honored ways of doing business. "Radical change can't occur if people are thinking, 'Does the boss really care about this?'"

The percentage of corporate technology projects that succeed -- are completed on time, within budget, and with most of the desired features and functions -- has risen over time but is still abysmal. That number in 2000 was 28%, vs. 16% in 1994, according to Standish Group, which looked at more than 8,000 IT projects at more than 400 companies of various sizes. Some 23% of projects failed outright, while an additional 49% were completed overbudget, beyond deadline, or with fewer features than promised, the Standish Group found.

BITTER EXPERIENCE. Hershey Foods' 1999 experience with a new distribution system illustrates what can happen when a company isn't on top of its IT issues. No one directly blames former CEO Kenneth Wolfe for what the company concedes were foul-ups that left candy sitting in warehouses on the eve of the company's peak Halloween season. (Hershey's third-quarter profits in 1999 dropped about 18.5% before the problem was solved.) But consultants involved with fixing Hershey's IT mess faulted top management for failing to fully understand the scope of the project.

Bad timing: Hershey tried rolling out three new systems just before the holidays. For one thing, they say, Hershey tried to do too much. The company attempted to install three new systems -- supply chain, customer service, and a system-integrating enterprise-resource-planning package -- all at the same time. And the candy maker’s timing was bad, in that it decided to roll it out right before the high-volume holiday season. "A lack of technological savvies at the top, whether it was the CEO, or CIO, or somebody else, was to blame," says Dave Boulanger, the research director at e-commerce advisory firm AMR Research in Boston, which was summoned to help fix the bugs. "If you don't understand the complexity of it all, this is precisely the kind of thing you would do," he adds. Hershey officials decline to comment on the project or its problems.

Such IT disasters can even affect the choice of a CEO. After announcing a search for a new chief exec last November, Hershey brought in Richard Lenny from Kraft Foods earlier this year. Boulanger says Hershey's past woes made tech literacy a factor when it decided to go hunting for a new No. 1. "The successor has an understanding of technology and the risks involved," Boulanger says. In a statement at the time, Hershey said the shuffling was "the culmination of a planned succession process," that left the 62-year-old Wolfe as chairman.

PROTECTING MARKET VALUE. One reason that CEOs must be on top of technology is that IT blowups can trash their company's stock. On average, companies lose $670 million in market value over a two-day period after announcing an IT-related problem, such as a hardware or software glitch, according to research by Mark Keil of Georgia State University and Anandhi Bharadwaj at Emory University, who looked at companies with an average market cap of $27 billion. Their study tracked the stock market response to major IT mishaps between January, 1990, and April, 2000, at 241

companies with $14 billion in annual revenues, on average.

"In most of the cases that I am familiar with, the management issues are the most important reasons that the projects got messed up," says Keil, an associate professor of computer information systems. "Inadequate specification of what the requirements are for the project is often the cause of these failures."

Of course, CEOs don't have to become geeks to avert IT disasters. "They don't need the ability to code in Java," says Anthony Paoni, professor of e-commerce and technology at Northwestern University's Kellogg School of Management and a partner at DiamondCluster International, a technology consulting firm. "The bytes of it is almost the wrong thing to know, because [a CEO who's concentrating on that] might lose sight of the other things," adds Norm Chervany, professor of information and decision sciences at the University of Minnesota's Carlson School of Management.

IS THIS REALISTIC? What's more important, Chervany says, is knowing the right questions to ask. A key query is how tech projects relate to the company's overall business strategy. "The technology might work when you turn on the switch, but you might not get the right business benefits," Berez notes. That's a kind way of describing a project that was a waste of time and money. CEOs should know what problems an IT project can address and whether solving them is worth the cost. They should also have a realistic idea of how much time and money it will take to get the new technology to work. "They need to understand the magnitude of the resources that will be required," Chervany says.

As Jim Kelly, CEO of UPS, the world's largest package-delivery company, sees it, asking the right questions was critical to his company's success in exploiting IT after initially being a technology laggard. In the mid 1980s, top execs, including Kelly, were skeptical of the need to develop a costly system to track package deliveries. Competitor FedEx was doing it, but Kelly and others weren't persuaded that customers wanted that service when more than 99% of packages were delivered the next day anyway.

Customer feedback revealed that the execs were wrong, and UPS went on to develop a shipping-information system that it claims has more capabilities than its rival's does (see BW, 5/21/01, "UPS vs. FedEx: Ground Wars"). Today, that system is the foundation for a variety of nonpackage services that UPS provides for third parties, including warehousing and inventory management. This logistics part of the business now accounts for about $1 billion of UPS's $30 billion in annual revenues, and it's predicted to grow 30% to 35% this year.

Partly as a result, UPS now ships a big chunk of the packages in the U.S. that are ordered over the Internet. "Fortunately, we asked the right questions," Kelly says. "We took the customer's view, not just what we thought was best for the customer. That's a good example of why IT has to be customer-focused."

"YOU CAN GET SNOOKERED." Up to a point, the more sophisticated the chief is about technology, the better, says David Friend, CEO of Boston-based Sonexis, a software company that makes products for phone-conferencing and other telecommunications services. "The bigger your technical vocabulary, the better you can understand the language of your IT staff. If you're not careful, you can be in a situation where you can get snookered by the tech people who don't always see the business issues," Friend says.

Consider, Friend adds, that techies are often obsessed with computer-system performance. They spend

their entire day around computers, so why shouldn't they be? But speed shouldn't be the only consideration in making IT spending decisions, Friend warns. For instance, a speed-obsessed tech exec might lobby for buying database software that's faster than that of a stalwart such as Oracle Corp., the No. 1 database-software company.

A CEO, however, must be aware of the challenges of going with alternative systems. An Oracle programmer can be found on every street corner, Friend says, but experts in more obscure software might be tougher to recruit. What's more, a CEO who doesn't know to ask about scalability -- the expandability of the software or system -- could end up with a costly tool that becomes obsolete all too quickly. "Your IT people may lead you down a road that is creating a foundation for millions of dollars of development that may be the wrong foundation to build on," says Friend. "Then you're stuck with a white elephant."

COMMUNICATION BREEDS SUCCESS. One way of helping ensure that an IT project doesn't turn into a runaway train is for the CEO to develop a good rapport with the company's chief techie -- and vice versa, says London Business School's Earl. Part of this relationship involves making sure that business and IT strategy have common goals, Earl adds.

UPS is among the companies that seem to get this. Ken Lacy, its CIO, isn't consigned to the geek wing of the company's headquarters in Atlanta. Rather, he sits on UPS's marketing committee and management committee, among others, in addition to its IT committee. Over the past 15 years, UPS has invested more than $11 billion in IT -- more than it has spent on delivery vehicles, says Kelly. "Our CIO is involved in all aspects of our business," Kelly adds. "Lacy makes as many decisions about business strategy as he does about technology."

With technology changing almost as fast as you can say "overnight delivery," CEOs need to stay current to make sure their companies stay competitive. Kelly says he reads a lot, talks to his peers, and listens to members of his technology team -- who "help me stay on top of what I need to know and share in virtually every major decision." That's a forumla for becoming a tech-savvy CEO.

Article #5:

HEADLINE: COMMENTARY; ANOTHER INFORMATION SYSTEM FAILS—WHY?; TECHNOLOGY: THE MESSINESS OF LARGE AMOUNTS OF DATA TENDS TO SWAMP THE SPRAWLING NETWORKS THAT GOVERNMENT WANTS TO BUILD.

BY: MARCIA J. BATES. Marcia J. Bates is a professor in the Dept. of Information Studies at UCLA

It seems as though we hear every month of yet another multimillion-dollar information technology failure in the California state government. In the latest case, a system to link welfare networks was abandoned after the expenditure of $ 18 million. It is time we learned the lessons of why these systems fail. To date, many managerial, oversight and technical problems have been identified, but two very important elements are underplayed or missing altogether in the discussion.

The first missing element is a deep understanding of the human factor in technology implementation and use. Information technology often is looked upon as something you go out and buy and install, like bringing home a new lamp and plugging it in. But, in fact, to function effectively, information technology has to be fully and successfully integrated into the activities of the people who use it.

A new automated information system, especially one built around the core activities of an agency, will change almost every activity of the agency and will inevitably alter power positions and job descriptions of everyone along the way. A manager's power may be increased because the new information system enables the integration of two departments under one command, or it may be weakened because fewer workers are now needed. That manager will not be passive about these changes.

Even the lowliest clerk may dig in and sabotage the project because it necessitates a move from an office with a window to one without a window. High-level managers commissioning new systems ignore these factors at their peril—yet they often do ignore them.

The other big piece missing from the discussion is information expertise—an understanding of how people search for and use information, and how best to organize information within the computer to facilitate retrieval. For example, a system that holds the names of 50,000 people will not be too problematic when retrieving duplicate names; with a system of 5 million names, the duplication problem explodes and can halt the entire system unless sophisticated solutions are employed. More generally, information retrieval systems of all kinds are notoriously size-sensitive and do not scale up well without significant design changes.

In most real-world information systems, simple, conventional database structures are not adequate for handling the messiness of the information.

Imagine a child welfare agency's information system: At any given moment, a child may be under several governmental jurisdictions, may be at one stage of a lengthy, multistage process determining the disposition of the child's case and may be under a complicated arrangement set up by the court for visitation by a parent or guardian.

The design of a system to organize such information so that it is retrievable and useful for the various agencies and individuals who need to access that file is a major task in and of itself. It requires expertise not only in computer systems, but also in information organization and retrieval techniques. Each type of information in that child's file may need to be indexed according to different principles of categorization, with different search capabilities made available for the file users for each type of information.

For example, one type of information may lend itself best to a classification using just a few categories; another type may best be searched using a thesaurus of technical vocabulary in use in that particular agency. Information-related design skills do not replace computer systems analysis; rather, people with these skills should be working with the systems analysts—and their expertise should be given equal weight with that of the analysts.

The technology is highly visible; the information, and the social meaning of the information technology, are not so visible. Usually, in the design of such systems, great attention is paid to buying the computers and programming them, while the human and information-related factors are shortchanged or ignored altogether.