Beating the Boomer Brain Drain Blues

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Reader ROI

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The oldest baby boomers are six years away from retirement. Will your company continue to thrive if they take their knowledge with them? Here's how to identify who has key knowledge and how to keep it within the company walls.

In 1997, with the Cold War well behind them, thousand of engineers who had helped design and maintain the B-2 bomber were asked to leave the integrated systems sector of Northrop Grumman. As the nearly 12,000 workers filed out the door, leaving only 1,200 from a staff of 13,000, they took with them years of experience and in-depth knowledge about what was considered at the time to be the most complex aircraft ever built.

Northrop Grumman knew it had to keep enough of that know-how to support the division's long-term maintenance of the B-2 bomber, so a newly formed knowledge management team identified top experts and videotaped interviews with them before they left. But it was hard to get everything in a single interview, says Scott Shaffar, Northrop Grumman's director of knowledge management for the Western region of the integrated systems sector. "We did lose some of that knowledge," says Shaffar. "In an exit interview, you can capture certain things, but not a lifetime of experience."

Northrop Grumman scrambled at the time to identify experts in key areas related to the program and to create a central repository for project documents. The aerospace giant kept enough of that knowledge to maintain and move forward with B-2-related upgrade projects, even as some expertise disappeared. Still, Northrop Grumman learned some important lessons about preventing a massive brain drain in the future.

Eight years later, the company uses a variety of tools to retain and transfer knowledge from its engineers—well before they retire. Shaffar and his team have put in place document management systems and common work spaces that record how an engineer did his job for future reference. They have started programs that bring together older and younger engineers across the country to exchange information via e-mail or in person about technical problems, and they are using software that helps people find experts within the company.

While most companies won't face the sudden departure of thousands of skilled workers, as Northrop Grumman did in the late 1990s, they and government agencies alike will need to prepare for the loss of important experience and technical knowledge as the baby boomer generation gets ready to retire over the coming decade. By 2010, more than half of all workers in the United States will be over 40. As of 2005, the baby boomers (the generation born after World War II) range in age from 41 to 59, and their numbers almost double the Generation X that follows them. And unlike their younger counterparts, many boomers have spent a large chunk of their careers in one company or agency, building up stores of experience and knowledge. While some KM experts downplay the issue, claiming that younger generations will take over and bring new skills as their older colleagues retire, it is clear that many companies are already feeling the pinch as those on the older fringe have started to leave the workforce. According to a study by AARP, more than 60 percent of U.S. companies are currently bringing back retirees as contractors or consultants.

Federal and state government, as well as industries such as aerospace, defense, energy and utilities, will be hit hard by the large-scale retirement of skilled workers, says David W. DeLong, author of *Lost Knowledge: Confronting the Threat of an Aging Workforce*. That's because such sectors generally rely on older, legacy technologies

3 Easy Steps for Preventing Brain Drain

1 Identify your vulnerabilities. "Many companies don't know where they are most vulnerable to knowledge loss," says David DeLong, author of *Lost Knowledge: Confronting the Threat of an Aging Workforce*. One way to get around this is by doing an age profile of your workforce by work unit or by function. Determine the average age of employees in each unit and identify who's likely to retire or leave the company for other reasons.

2 Identify types of knowledge at risk. Use interviewing and social network analysis software to find out what knowledge is most valuable. This will help you decide where to focus your knowledge-retention efforts.

3 Choose your tactics. If you're focusing on transferring "tacit" knowledge, or experience that is hard to catalog, establish mentoring programs or communities of practice that bring older and younger workers together for extended periods. If you need to document information quickly before key employees retire, start developing databases and other repositories.

SOURCE: David DeLong

and have not hired large numbers of younger workers in decades. "The demographic shift and change in the coming workforce are incredibly serious in certain sectors and work units," DeLong adds. These companies and agencies in particular need to act quickly.

"Companies need to figure out who has the important knowledge, and they need to capture it before it's too late," says Carl Frappaolo, cofounder of consultancy Delphi Group. "If they don't, they'll be paying to reinvent the wheel."

Costs of Lost Knowledge

While most top managers are aware that they'll soon have a lot of workers retiring, few are doing much to prepare for the event. That's often because it's hard to quantify the cost of losing knowledge. "The baby boomer exodus is the elephant in the room when I talk to managers," says Mary Corcoran, vice president and lead analyst at Outsell, a research and advisory firm. "Most are not doing anything in a major way about retaining knowledge."

CIOs can take a leading role in preventing baby boomer brain drain by being prepared to respond quickly when management decides the company needs a KM system to help retain crucial knowledge. "CIOs need to know what's going on in this area because records management, search tools and databases will be running on their systems," says Frappaolo. In many cases, KM and human resources leaders can work closely with CIOs to put in place databases that track knowledge and other technologies as part of an overall plan. Northrop Grumman's Shaffar, for example, says he works closely with the IT department and spends more than 50 percent of his KM budget on IT—and will continue to do so. "How would engineers connect across the U.S. if they didn't have e-mail, instant messaging or document management systems?" he asks.

Shaffar and other KM experts stress that even within a single company, brain drain won't hit all departments or units in the same way. Larry Mohl, chief learning officer for Children's Healthcare of Atlanta, a pediatric health-care organization, says his past experience at Motorola and American Express showed him that while knowledge loss is an ongoing problem, it's not pressing unless it involves a specialized skill that is crucial to the organization's success. Mohl says that natural turnover from retirement won't create a crisis at

most companies. Still, he says, it's important to identify top performers in the organization and work to keep them and accelerate promotions as a way to ensure good succession planning. And if key people are going to be retiring, a company must act quickly to keep their knowledge.

Experts divide such critical know-how into two parts: explicit and tacit knowledge. The explicit kind refers to information that can be easily explained and stored in databases or manuals. Tacit knowledge is much harder to capture and pass on because it includes experience, stories, impressions and creative solutions. Tacit knowledge is also much harder to get from people because it accumulates over years of experience, and a scientist or salesperson may not even know how to verbalize it.

Dorothy Leonard, professor emerita of business administration at Harvard Business School and coauthor of *Deep Smarts: How to Cultivate and Transfer Enduring Business Wisdom*, argues that companies and government agencies should concentrate on re-creating tacit knowledge, rather than focusing only on transferring it (see a recent column by Leonard, "How to Salvage Your Company's Deep Smarts," at *www.cio.com/050105*). For example, if an experienced scientist plans to retire in a year, the pharmaceutical company where he works should have a younger researcher shadow the scientist and work side by side. "In this way, the younger scientist will learn not just the facts, but the method of diagnostics," Leonard says. "Databases are not a complete waste of time, but it's a mistake to believe they are transferring knowledge."

In some cases, it's easy to see that the loss of a key employee, or group of employees, will affect a company's strategy and bottom line. At engine manufacturer Rolls Royce, for example, managers—when faced with the impending retirement of a veteran systems engineer—calculated that the engineer's retirement would cost the company $400,000 in the first year, says Colin Cadas, team leader for design technology at the U.K.-based company. Cadas based the calculation on the number of employees whose productivity is affected when the system is down and the average time the system is unavailable. Using that calculation, managers could then justify the knowledge acquisition activity before the engineer (the primary troubleshooter for that system) left. The process also guaranteed increased training for younger engineers before the retiring engineer left the company. "For every knowledge retention project we do, we have those involved work out the business value to the organization," Cadas says.

Stop the Bleeding

Rolls Royce faced a crucial test in April 2003, when British Airways and Air France ended service of the Concorde supersonic jet, citing diminishing passenger numbers and rising maintenance costs. Rolls Royce, which had maintained the supersonic Olympus engines since the planes started jetting rock stars and business titans across the Atlantic in the 1970s, realized it needed to act quickly. And managers knew this specialized knowledge was crucial to securing future opportunities in hypersonic propulsion. So they set out to find the people with this experience, some of them already retired or moved away.

After finding the 46 people who had this specialized experience, Cadas set up a program that allowed younger, recently hired engi-

Teaching New Dogs Old Tricks

How Raytheon pairs experienced workers with newer employees

In 2003, executives at Raytheon Missile Systems decided they needed a plan to transfer knowledge between subject-matter experts and less experienced employees. Even without the problem of impending retirements, "You can never guarantee that people will be in the same place forever," says Mary Contini Gordon, Raytheon's manager of innovation services.

Gordon, with help from Sheryl Lain-Young, project manager for retaining corporate knowledge, created a pilot program that partners a senior technical expert with a junior colleague. A coach then helps the two work together. The first challenge was to find experts, who were identified by an executive coach. The experiences of Raytheon and other companies trying this approach shows that in most cases, subject-matter experts are eager to share their knowledge. Here are some tips to encourage your more experienced experts to get involved in mentoring and other types of knowledge-sharing programs:

■ **LET THEM KNOW HOW MUCH THEY ARE VALUED.** Experts are usually proud of their work. When the company recognizes them and singles them out as valued employees, they are often more than willing to pass along knowledge that will help them leave a legacy of their work.

■ **GET SUPPORT FROM TOP MANAGEMENT.** Even employees who are getting ready to retire may feel overworked and overprogrammed, leaving little time for meetings with junior staffers. If they are given the time or are relieved of some other tasks, they will not feel that it's an added burden.

■ **LET THE EXPERTS HELP DESIGN THE KNOWLEDGE-SHARING PROGRAM.** Depending on the area of expertise, older and younger employees may work side by side, but in other cases they may have to work from separate offices and meet regularly in person or by phone. *–S.P.*

neers to interview the older experts. The engineers met and went through a questioning process that enabled the younger employees to learn about supersonic technology and then to put that knowledge into a repository for future reference. "This was a double win for us," Cadas says. He adds that while in many cases older employees typically need some sort of incentive to participate, this time they were "falling over themselves" to teach the younger employees about the technology because they were proud of their accomplishments and were eager to see their knowledge retained for future use.

The experience at Rolls Royce illustrates an urgent situation in which a cutting-edge technology risks becoming obsolete. But the death of certain skills isn't always a cause for mourning. For example, few would complain that they can't find a typewriter repairman in the phone book. However, organizations must carefully analyze whether a technology or skill might be needed in the future. "Companies need to ask themselves, What can we not afford to lose?" says Melissie Rumizen, senior knowledge strategist at consultancy SAIC and author of *The Complete Idiot's Guide to Knowledge Management*.

KM Can Aid in Succession Planning

Some companies turn to software to help predict future departures and determine crucial knowledge. Succession planning or talent management software can give organizations a good picture of who is working for them, how they are performing and how long they'll be around. With retirement on the horizon and new management positions to fill last year, automotive chain Pep Boys started using succession planning software from SuccessFactors to give it a clear picture of all employees at the company's 584 retail and service centers. "The risk of knowledge loss will always be there because there will always be unexpected departures," says Liviu Dedes, Pep Boys' director of training and organizational development. "But if you have a solid process to map out who is in your leadership pipeline, you'll be better prepared to fill job openings, retain top-performing employees and prepare for retirement."

Dedes says that the software lets him check how many employees are near retirement age and how many might be leaving soon for other reasons. Another way to get a visual picture of human interaction and pinpoint the go-to people in an organization is to do a social network analysis (SNA), which often involves interviewing employees and managers to see who is working with whom, and whom employees go to most often for help. SNA software can help organizations map out relationships and get a clear picture of who has the most knowledge and experience in a specific area (for more on SNA, see "Who Knows Whom, and Who Knows What?" at *www.cio.com/061505*). The next step is to work on retaining those people, says Mohl at Children's

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Healthcare of Atlanta. "You need to focus on helping these people advance as quickly as possible," he says.

Keep the Data

Once a company identifies key knowledge, it must develop the data-collection tools so that others can use it. In Illinois, where almost 10,000 out of nearly 60,000 state government workers have taken early retirement since 2003, a KM group has developed a database to capture the experience of buying government goods and services for the lowest prices. In the past, employees left without passing on the money-saving know-how. In one instance, the person responsible for buying cars and trucks for the state retired without leaving any information about vendors, prices or negotiating techniques. "When she retired, the new buyers had to start from scratch," says Paul Campbell, acting director of the Illinois Department of Central Management Services (CMS).

Illinois' central purchasing department, which spends close to $8 billion a year, is facing heavy retirement in the coming decade. And it is not alone among government agencies—both state and federal. At NASA's Langley Research Center, for example, the first national civil aeronautics laboratory, 55 percent of the workforce is eligible for retirement. In an attempt to prevent a further loss of knowledge as the baby boomers depart, the state created a procurement database that brings together information from past purchases and includes vendor and product comparisons. With less than a $20,000 initial investment, the department built the system as an add-on to its Lotus Notes e-mail system, easing the training for workers already familiar with that program. Purchasers can now search the database before they start negotiations with a vendor. "Before we had this, our buyers were at the mercy of the vendors," Campbell says. Illinois is now working with Microsoft to create a Web-based state procurement system that will eventually include information from other states.

KM experts caution that databases, portals and other electronic repositories are often ignored by workers who would rather get information from colleagues. "There are plenty of databases out there that are graveyards," says DeLong. But in some cases, he adds, lessons-learned databases and other technical tools are the only means of keeping information at hand for future use. While mentoring, shadowing and communities of practice can help train newer employees and encourage more experienced workers to pass on their know-how, cataloging key information as a reference can help cushion the blow of retirements. Common search tools and storage databases can then help retain such explicit knowledge.

At Bruce Power, a private nuclear power operator in Ontario, Canada, management saw the need for such tools several years ago when it became clear that 40 percent of its 3,200 employees were