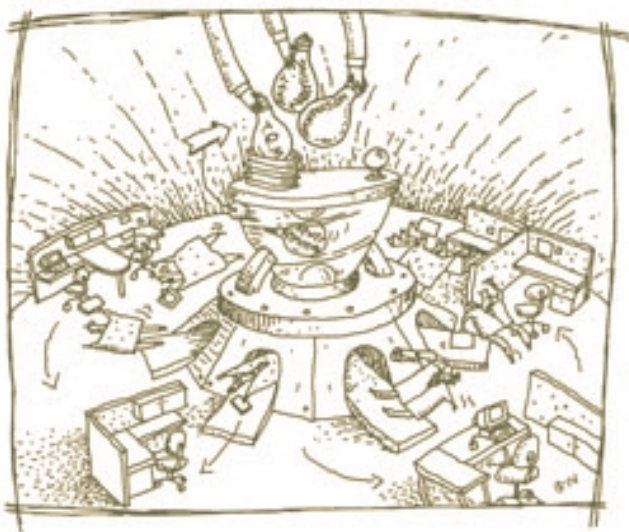


Churn in the Workplace

Understanding and Managing its Impact



The ability to respond quickly to change is one of the major challenges facing corporations in today's highly competitive global economy. Companies must constantly rethink and adjust their business strategies to meet the dynamic needs of the marketplace, and with each successive change they must rethink the ways in which they organize and carry out their work. These changes result in churn, the terminology used for moving people or equipment around within a facility or from one location to another. And while churn may ultimately have a positive impact on an organization's goals, its immediate effect can be both disruptive and costly, particularly for companies with multiple facilities and thousands of employees, if appropriate strategies are not implemented.

Although all organizations experience churn as part of the normal business cycle of growth and expansion or contraction and right-sizing, the extent and frequency of churn can vary considerably. The nature of the industry, the functions of specific departments or facilities, or the work processes employed all affect the rate of churn. The telecommunications industry, for example, is currently experiencing a high rate of churn as it reorganizes and restructures in response to deregulation measures enacted by the federal government. In addition, newer industries, like technology, that are rapidly bringing new products to market tend to experience higher rates of churn than more mature industries. Within organizations, work processes like teaming can result in ongoing high rates of churn. Project teams that come together for a short period of time to perform a specific function and then disperse or re-form to work on new projects typically experience higher rates of intra-office churn than employee groups with more structured job functions, like accounting.

While any company in the midst of increasing, decreasing, or reorganizing its work force may experience an unusually high rate of churn, data gathered by the International Facility Management Association (IFMA) for its 1997 Benchmarks III report¹ indicate that the average rate of churn for all industries is also high—44 percent—up 14 percentage points from the average rate of churn reported in IFMA's 1988 Facility Management Practices Report. These historical figures suggest that, although churn rates varied dramatically for one industry group or a particular company or facility at any given time, the average rate of churn for all industries had remained relatively constant until recently, not rising much above or falling below 35 percent.²



Some variation in churn rate is reported among industry groups, with institutions averaging 24 percent, service industries averaging 48 percent, and manufacturing companies averaging 48 percent. The 1997 report also shows that churn rates vary according to facility use, with offices located outside of headquarters facilities experiencing the highest rate of churn (66 percent) and health care facilities experiencing the lowest rate of churn (32 percent).³

However, companies that are undergoing major changes that involve a large number of people, or an entire organization, are often experiencing churn rates of 100 percent or higher. For those companies, the impact of churn can be overwhelming and can stretch corporate resources to the limit.

Defining churn rates

Churn rate is defined by IFMA as the number of office moves during a given year, expressed as a percentage of the total number of offices occupied. But churn and churn rates occur in different companies in different ways and are not always reported in the same manner. If a company has 100 employees and a reported churn rate of 90 percent, for example, it may mean that 90 employees moved once or that nine employees moved 10 times. Additionally, some facility managers or companies include workstation equivalencies in their reported rates: If 50 percent of four workstations are changed, the change is reported as the equivalent of two offices. Some companies calculate their churn rate by measuring the number of square feet on the floor affected by changes rather than the number of offices. So, when companies report their churn rates, they frequently use single numbers to include many different kinds of churn.⁴

Causes of churn

To implement appropriate strategies to manage churn, it is important to understand its underlying causes. Data gathered by IFMA indicate that, while major moves related to business growth (moving an entire company into a new facility, for example) may have a significant impact on a particular company or facility at any given time, the major reason for churn in companies with both increasing or declining work forces is reorganization—changes in the structure of the business.⁵

These changes occur as the result of implementing new business strategies. Strategies like total quality management, with goals of continuous innovation and the need to bring products to market quicker and with fewer resources, have led many companies to view continuous reorganization as a necessary means of improving both their products and their work processes. While moving people from place to place within an organization is a dynamic and effective way to achieve those goals, companies are also seeking ways to minimize the disruptions and costs associated with making those changes.

Research by the Facility Performance Group, which looked at the best facility management practices of more than 60 Fortune 500 companies, identified three primary sources or levels of churn within an organization:⁶

1. Company-wide restructuring, as a result of mergers, downsizing, and total quality management-based consolidations;
2. Ongoing employee moves (co-locations) to assure greater efficiencies within and between operations and departments; and
3. Ongoing formation and operation of project teams.

These three levels of churn, together and individually, present a major challenge to facility managers. Three of the biggest challenges are related to reconfiguring furniture, power and cabling, and walls (space).

Of the three elements, furniture is the least expensive to move, although it is moved most often. Freestanding furniture is moved most frequently—daily to monthly—and is easier and less costly to move than systems furniture. Systems components are moved, on average, four to five times a year, while systems panels are moved one to two times a year. Companies report that it costs between \$250 and \$450 per office, excluding power and cabling changes, to move systems furniture.

Changes to power and cabling usually rate second to furniture in costs and downtime impact, with per-office costs ranging from \$200 for simple changes or additions to \$600 for extra circuits and receptacles. Disengaging power and cables from the furniture before panel changes can be made and then reinstalling the panels (usually with cable or receptacle changes) present the biggest problem when replanning occurs in response to churn.

Modular partitions that are perpendicular to spine walls and form office spaces are moved, on average, once a year, while movable walls that enclose team rooms or departments are moved once every one or two years. Full-height drywall construction for team space perimeters, spine walls, and team/department enclosing walls is changed once every two to three years. Drywall changes take the most time to accomplish, and while those changes are made least often, they are the most costly—\$100 to \$200 per finished linear foot with cable installed.⁷

Strategies for managing churn

The Facility Performance Group found that facility executives are using a variety of different strategies to manage churn-related facility costs and to minimize disruptions and downtime to company operations and departments. Which strategies they choose depends on which level or source of churn their company is experiencing.

These ways of managing churn are often used in combination by facility managers:

- strategic facility planning for forecasting long-range and near-term churn;
- universal planning and free address (unassigned) offices for ongoing churn associated with co-locations of departments and project team operations—an approach that moves people rather than facilities;
- fixed spine walls, to reduce the costs associated with technology churn;
- raised floors and plenum spaces that allow technology to be reconfigured quickly and easily to support frequent moves (for companies that embrace churn);
- flexible furnishings that allow facilities to be adapted easily to meet changing requirements; and
- desktop and teleconferencing technologies that provide an alternative to physically relocating people.

Strategic facility planning

Overall, the most-effective strategy for managing company-wide churn is strategic facility planning. According to the Facility Performance Group, “An ability to accurately forecast the long-range (typically two to three years for most facility departments; three to five years in

others) and near-term (one-year) facility requirements, particularly building capacity and location needs, does more to reduce churn rates and related costs following company-wide restructuring than any other single method. As much as 50 percent of all churn occurring after such restructuring can be attributed to poor facility solutions provided at the time of restructuring.”⁸

“It is essential for companies to look at all the components of churn before they can manage it successfully,” says John Stivers, a facilities consultant. “Companies need to understand the rate of change in all areas of their business—where change is happening and why. Then they need to ensure that facility design effectively matches work processes and work styles, look at the associated costs, and structure their services accordingly.”⁹

Effective strategic planning requires that corporate planning and facilities groups work hand in hand, but it is a strategy used by fewer than 20 percent of U.S. companies.¹⁰ In the absence of strategic planning, companies are relying on several methods to manage churn.

Universal planning

Universal planning, or one of its variants, is one of the most widely used strategies for managing ongoing employee churn. This approach uses a generic one-size-fits-all office space for employees and reduces facilities churn by moving people rather than offices. It also reduces occupancy costs, because it does not require entire workstation clusters to be reconfigured to accommodate change and furniture componentry is selected from a common inventory, which also reduces inventory management costs.¹¹

Universal planning generally works best in companies where work functions are similar and more structured and where departments and teams use standardized rectangular layouts that follow the building grid. But the department and office spaces still require numerous changes and adjustments, often beyond the scope and range of the originally provided three or four offices.¹²

The Facility Performance Group estimates that 60 percent or more of all companies use a variant of universal planning to manage churn, with most companies using three or four basic offices rather than just one. “Companies using (this strategy) report the lowest facilities churn rates (20 percent per year for space), even though the people churn rate is very high (75 percent or more).”¹³

“If you look at how facility services are measured for their success, it is generally in terms of their response time,” says Martha Whitaker, a consultant with architectural firm HOK. “The key factor to be determined is how quickly facility changes need to be implemented in an organization. The easiest element to move is people; so if response time is absolutely critical, then workplaces become more and more generic and you move people rather than furniture. For some organizations, change doesn’t need to happen that quickly, so their strategy may be different.”¹⁴

Lexis Nexis Corporation has taken the universal planning approach to manage churn at its headquarters facility in Dayton, Ohio. The company has standardized as much as possible on open-plan, 8-foot-by-8-foot workstations for every professional, the only difference being the addition of transaction surfaces, low panels, and corner work surfaces for the secretarial staff, according to Teri Rybolt, manager of Facility Services.

“Our rate of churn was 72 percent last year, mostly driven by reorganizations, which seem to be happening weekly,” says Rybolt. “My goal has been to simplify the moving process and reduce costs by having a standard workstation for everyone. But employees also want the ability to customize their spaces. So that is where we are challenged right now, wanting to support that ability and keep within budget constraints at the same time.”¹⁵

At Southern California Edison’s general office complex in Rosemead, California, and at Hewlett Packard’s Inkjet R&D facility in San Diego, facility managers have adopted a universal standard with a “kit of parts” approach. This allows employees to customize their 8-foot-by-8-foot workstations by choosing certain components from a standard kit of parts to support their individual work requirements. This strategy permits a universal module, but gives employees more ownership and control of their work space.¹⁶

The redesign and reconfiguration of Hewlett Packard’s Inkjet R&D facility has also dramatically reduced the cost of moving employees. Prior to the redesign, moving a high-performance employee took two days and cost \$4,000—a considerable expense for the company, given that R&D employees often move two or more times each year. Now, a move costs \$300 and takes just five hours.¹⁷

U.S. West, a global communications company, has also used a universal planning approach for its 17 megacenters located in 14

Midwest and Western states and was able to reduce the cost of per-person occupancy by 20 to 30 percent a year.¹⁸

Another advantage of using a universal grid to manage churn is that it allows space to be converted quickly to other functions, if required. At General Motors’ new 1.1 million-square-foot Truck Product Center site in Pontiac, Michigan, all workstations are based on an 8-foot-by-10-foot grid. “Everyone up to the vice president has, at a minimum, an 8-foot-by-10-foot modular workstation,” says Richard Deatherage of General Motors World Wide Facilities Group. “In addition, management workstations have an attached 8-foot-by-10-foot conference area, and secretarial offices have an attached 8-foot-by-10-foot filing space, which can quickly convert to office or conference space in the future, if required.”¹⁹

Free-address offices

Free-address (unassigned) offices are another variant of the “move people, not facilities” approach to managing churn. This strategy, used by less than two percent of all companies in the U.S., works well for companies whose employees work in several cross-functional teams at the same time. Because employees spend most of their time working and moving between team spaces, there are no permanently assigned offices. Workers have both portable and team-space technologies to maintain voice, e-mail, and faxed communication links.²⁰

This approach can place additional pressure on the facility needs of the team spaces, however. The spaces often need to be large and contain a range of support amenities, provide more privacy, and include adjustable furniture that team members can easily move around to meet changing requirements. The team spaces also undergo churn more often in terms of their interior spaces and perimeter walls.²¹

Fixed spine walls

In the past, systems furniture offered companies two advantages: the ability to accommodate and distribute power and cabling and the flexibility to be reconfigured to meet changing needs. Today, however, systems furniture must accommodate increasing amounts of power and cabling in order to support current technology, which makes it more difficult (and expensive) to move or reconfigure the furniture. At the same time, people and work processes are undergoing churn more frequently, which requires the furniture to be reconfigured more often.



To resolve this dilemma, facility managers either no longer use systems furniture as the primary way to distribute power and cabling on floors (using it only for local distribution) or have constructed permanent or semipermanent spine walls to serve as the main conduit for power and cabling.²²

“A fixed spine wall works extremely well in departments with a reasonably stable and structured work process, where positions are long-term and work styles are similar,” says Facilities Consultant John Stivers. “As needs change, offices can be reconfigured without having to dismantle the backbone of the electrical and cable distribution.”²³

The most successful versions of universal-plan solutions always use a fixed or semipermanent central spine wall. Movable (perpendicular) panels can be adjusted along the length of the spine wall, restoring some flexibility to the furniture. Offices can be configured on either side of the spine wall, which may also function as a boundary or fence between departments.²⁴

Raised floors/plenum spaces

Another approach to managing churn that has been adopted by a few restructuring companies is to construct totally new buildings that support moving everything—furniture, walls, power, and cabling. This strategy works well for companies that anticipate frequent reconfigurations of team spaces and that want to be able to make changes as quickly (and as cheaply) as possible.

The buildings have open and unencumbered floors (floors that do not have central structural or utility cores; those are located elsewhere in the building), raised access floors, or stand-up plenum spaces. Floor layouts can be changed quickly, because power and cabling can be quickly relocated; and simple and easy-to-move furniture can be used, because it does not need to carry large amounts of power and cabling.²⁵

DowElanco Corporation (a 60-40 partnership between Dow Chemical Company and Eli Lilly) uses this approach at its high-tech facilities in Indianapolis to lower the costs of frequent reconfigurations. The company’s Corporate Center has a Tate access floor and open-plan Herman Miller Ethospace workstations that can be easily disassembled and reconfigured to meet changing needs. Power and cabling in the underfloor area can be quickly relocated to support workstation changes.²⁶

Despite the initial high cost of the access floor, the investment has paid off. With an average churn rate of 60 percent a year, DowElanco calculates the cost of relocating a workstation to be approximately \$2.35 per square foot compared to over \$20 per square foot for hard-walled offices.²⁷

To support frequent change, SEI Investments has created a totally open, fluid environment at its new headquarters building in Philadelphia, Pennsylvania. The new building includes a series of flexible cable conduits that hang from the ceiling and link each desk to data and cable lines that run along ceiling supports. Mobile desks and a special custom-designed connector allow employees to move their desks within a 12-foot radius while attached to the cable conduit. When a move is required, employees can quickly disconnect from one cable conduit, move their desks to a new location, and plug into another cable conduit. Special software, developed by the company, reroutes telephone and data to the new address.

In the previous facility, an office move cost the company \$1,500 and took two weeks to accomplish. In the new environment, employees can move themselves as quickly and as often as they need to at virtually no cost.²⁸

Flexible furnishings

Many restructuring companies increasingly depend on the flexibility and adaptability of their furniture to solve their facility requirements and to manage churn. According to the Facility Performance Group, “as much as 50 percent of churn due to ongoing co-locations and teaming activities occurs because current furnishings do not adapt in place easily enough.”

In order to deal with this problem, some facility managers have decided to circumvent the need to change the furniture and panels altogether by using universal templates or off-module furniture products or by increasing the use of freestanding elements such as tables, storage units, and privacy screens, which are easy for end users to reposition.²⁹

To accommodate new conditions and adapt to new requirements, furniture systems must allow the following:

- higher-density planning and smaller individual office spaces;
- flexible work support;



- the ability for end-users to adjust visual and acoustical privacy; and
- the ability for end users to adjust their furniture to open up or close off their spaces.

Chiron Corporation, a biotechnology company located in San Francisco, California, has teamed up with Herman Miller to develop a prototype office standard that includes a range of highly functional, adjustable products that can support a variety of work requirements. The office prototype is being used in a series of pilot projects, with 250 employees currently using the new model.

"Our office prototype is universal in that it recognizes that there are key functional components within broad groups that need to be accommodated; so it's a basic kit of parts with different subsets," says Gary Nagamori, manager of Facilities Planning at Chiron. "All our employees perform different functions; but by making the office space more functional and flexible, the prototype office standard can actually adapt to support many different requirements."

"At Chiron, churn is an all-pervasive issue. It isn't just based on one or two things anymore; our business is changing, our strategy is changing, our planning process is changing. Anything we implement and execute from a facility standpoint is taking place in that milieu, and it affects every part of the process of designing, specifying, and ordering. So we really have to take a holistic look at how we are making the change, and we have to take a long-range overview of the cost of providing space for people."

Gary Nagamori points out that the dilemma for many companies is that they are trying to support work patterns that have become more specialized in order to be efficient, with tools that are becoming more and more generic. "In a sense, it is an anachronism; people and technology are becoming more specialized, but we are trying to get to a much less specialized environment. That's where the challenge lies for us."³⁰

At Nortel Technology's facilities in Ottawa and Brampton, Canada, a series of innovative measures have been adopted that allow office space to be quickly adapted to support changing needs.

"In the last two years, our focus has been less on trying to control churn and more on reducing the costs and turnaround time associated with churn, as well as improving the quality of the churn services we provide to employees," says Robert Guth, senior manager, Work Space Provisioning at Nortel.

"After looking at the root cause of churn in the R&D environment, we found that churn is normal and there is nothing we can do to prevent it. Our R&D projects tend to last less than one year; project teams form very quickly, and they have certain requirements that we have to meet right off the mark. The teams mature in a few months, and after the project those resources are assigned to other project teams."³¹

At Nortel's Ottawa facilities, where 10,000 employees occupy three million square feet of space, the company keeps a large floating inventory of furniture on hand, which allows facility managers to respond quickly to requests for changes. Each employee has a fully equipped workstation that meets minimum standards, and an annual facilities survey ensures that any substandard components are upgraded proactively.

All activity related to churn is tracked in real time, so that facility managers know exactly how many people are moving on what day, a month in advance, while ISO-certified processes and procedures ensure that services are delivered consistently.

To support churn at one research facility, Nortel facility managers are using an off-module workstation design developed in conjunction with the architectural firm HOK and Herman Miller. Perpendicular panel walls can be moved along a fixed spine wall to increase the number of workstations within a cluster without changing the outside perimeter of the cluster.

"Both the spine wall and the perimeter of the workstation cluster stay intact," says Guth. "Workstations are 8-foot-by-8-foot; and with no disruption to the spine wall, we are able to convert 8-foot-by-8-foot workstations to 8-foot-by-6-foot by moving the perpendicular panels. You can see how powerful that has been for us; the building was designed for 2,200 people, and we can very quickly increase the number of workstations by 20 percent."³²

In addition to providing a "kit of parts" approach that allows employees to customize their workstations, the company has developed a quick-ship program with its furniture suppliers to enable employees to order certain preapproved items, such as chairs or filing, directly from the vendor. Employees select items from an on-line electronic catalog, fill out an electronic request form, and send it on-line to the vendor, who delivers the item within two days.



"This program has been very successful," says Guth. "It's a win-win situation. It gives more control to employees, and it has reduced our overhead."³³

Because of its high rate of churn, Nortel emphasizes the need for high-performance furniture and service and support from its furniture vendors. "We are looking for products that perform, that meet our customers' expectations," says Bill Nonkes, manager of Churn and Engineering. "Durability is also key in a high-churn environment. We are constantly ripping furniture apart, moving it around, and sending it back and forth to the warehouse in trucks without protective blankets. It may have to survive ten trips to the warehouse and back before it becomes obsolete.

"We also need field support from our vendors that is second to none. Our customers don't have time to wait for service, and they don't want to be subjected to disruption twice on a move. They want support that is quick and professional, and this is an area where the vendor makes all the difference."³⁴

Reconfiguring computers and telephones

Despite the investment in high-performance facilities and furniture systems to create flexible work spaces that respond quickly to change, facility managers often find that their best efforts are hampered by the need to reconfigure employees' computers and telephones.

"We used to think that if we had flexible furniture, people could move themselves," says Nortel's Bill Nonkes. "But if we had an access floor or different furniture or workstation layouts, it wouldn't reduce the time or the cost associated with churn. We've discovered that it's not moving the furniture or pulling cables that drives up the cost or takes longer to do. The problem is moving the desktop. We've become so efficient that we are hindered only by the speed at which the technology can be relocated."³⁵

Part of the problem results from the switch that many companies made in the early 1980s from centralized computing to distributive computing, with its local area networks (LANs) and servers for specific departments or facilities. When employees move from one department to another, a systems administrator may have to shuffle an entire group of people on one server to make room for more

people or set up a new server. In addition, new passwords have to be created and computer desktops have to be reconfigured so that employees can download their files and print documents in the new location—all of which takes time.

"We were hoping to reduce the cost of churn with less furniture to reconfigure and fewer walls to build, but the facilities side of churn is beginning to pale in comparison to the costs associated with the information technology," says Chiron's Gary Nagamori.³⁶

"At Lexis Nexis we have a large technology group that is in the process of establishing a standard desktop for everyone," says Rybolt. "That simplifies the move of computer equipment, but inevitably we end up having some people with Sun workstations, some with standard PCs; and with every move there seems to be an anomaly you have to work through.

"We have a very sophisticated telephone system that has the technology to allow people to program their phone extension and port number, deactivate at one location, and reactivate at the new location with the same extension. We haven't implemented that yet; but if people truly have all the information they need on-line, they will need to move only their personal effects when they change location. Our vision is eventually to have people be able to move themselves."³⁷

Desktop and teleconferencing technologies

Although the time and costs associated with making desktop and telephone changes may hamper the ability to make changes quickly, many companies increasingly view desktop and other teleconferencing technologies as a viable alternative to making physical co-locations of employees to form cross-functional teams.³⁸

Building new facilities or renovating existing buildings to house cross-functional teams and relocating people can be extremely expensive. In certain areas of the United States, building ordinances, air pollution, population density, and traffic congestion may make it impossible. Skilled workers with lifestyle and quality-of-life preferences, as well as the high cost of living in many parts of the United States, also contribute to the problem. As a result, many facility managers and information technology managers are proposing that, instead of face-to-face meeting sites, team members be provided with high-quality desktop links.³⁹



Convincing managers that this approach is not only possible but desirable can sometimes be a difficult proposition, however.

“With today’s technology—voice mail, e-mail, and the virtual worker—you don’t necessarily have to have people in close proximity to one another,” says Rybolt, manager of Facility Services at Lexis Nexis. “We have tried to explain to people that you don’t need everyone in your department sitting side by side on the same floor or even in the same building, but trying to convince department managers that embracing new technologies allows employees to be more effective and productive can be a challenge.”⁴⁰

Connecting people electronically, however, can have significant advantages. Many existing co-located team centers routinely install shared mobile teleconferencing units that enable customers, consultants, and other team members from around the globe to share information without having to physically relocate. That means that existing team sites are not growing, reducing future facility churn. In addition, the cost to maintain electronically co-located teams is far lower than building new facilities.⁴¹

Future trends

Most companies expect technology to play an increasing role in the workplace. A recent survey of facility executives indicates that the use of desktop video conferencing is expected to increase over the next five years, with an estimated 10 percent of employees gaining access. In addition, companies plan to implement more diverse ways of working, such as telecommuting, free-address, and hoteling, although employee involvement is expected to be at or below the 10 percent mark for each.⁴²

What these changes imply is a dramatic shift in the way companies think about, use, and manage their office spaces. The widespread use of universal and team planning implies a move away from facilities that reinforce traditional management hierarchies toward a more standardized use of facility space—a trend that is expected to continue. In addition, the move toward smaller offices for all employee groups is expected to increase, with managers and professionals experiencing the greatest decrease in office size.⁴³

While companies expect a growth in total employment over the next five years, they also expect continued fluctuations in the work force. These fluctuations will require facilities to be even more flexible and responsive to change.

The majority of the “best facility management practices” companies studied by the Facility Performance Group expect that their churn rates will begin to level off or decline to some extent in the next three to five years as downsizing and mergers decrease in frequency and as churn-management strategies already in place start to produce positive results.

However, 20 percent of the companies included in the report expect that their churn rates will increase to 100 or 150 percent over the next four to six years.⁴⁴

“My own estimate is that it will probably be another eight to ten years before we see widespread reductions in churn rates to 50 percent or less of what they are today,” says Jon Ryburg, president of the Facility Performance Group. “Also, if predictions of downsizing and mergers are way off the mark, those factors will continue to cause high levels of churn.”⁴⁵

As companies increasingly look for new ways to boost efficiency and productivity and to decrease operating expenses, their view of facilities is changing. Facilities are no longer viewed as corporate monuments, and facilities management is no longer seen as an inevitable business expense. Instead, companies view facilities as “a non-earning asset that can significantly impact their profitability (the bottom line).”⁴⁶

As a result, the role and focus of the facility manager has also changed. Facility managers must find new ways to contain costs—often with fewer resources. In addition, the role of the facility manager has changed from simply enforcing facility standards to being part of a larger team that provides solutions that support the work processes of internal customers. Finally, facility managers are required to take a more proactive stance toward organizational change in order to provide longer-lived solutions to manage churn.⁴⁷

Overall, the most effective way for organizations to manage change is for facility departments, information technology groups, and corporate planners to work hand in hand to develop both long- and short-term strategic goals. Strategic planning allows organizations to envision and anticipate market and business changes and assess how change will impact the profitability and revenues of the business. With changes to the structure of the business tied into a strategic facility plan, facility spaces and services can be developed that support the business strategy, match the work processes and individual work styles of employees, and respond and adapt easily to change.

Notes

- 1 The International Facility Management Association, Research Report #18, Benchmarks III, p. 36.
- 2 The International Facility Management Association, Research Report #4, Survey of Facility Management Practices, pp. 22, 23.
- 3 The International Facility Management Association, Research Report, #18, Benchmarks III, p. 36.
- 4 Ryburg, Jon, *New Churn Rates: People, Walls, and Furniture in Restructuring Companies*, Facility Performance Group, Inc., May 1996.
- 5 Ibid.
- 6 Ibid.
- 7 Ibid.
- 8 Ibid.
- 9 Stivers, John, Facilities Consultant, personal interview (June 1997).
- 10 Ryburg.
- 11 Ibid.
- 12 Ibid.
- 13 Ibid.
- 14 Whitaker, Martha, Consultant, HOK, personal interview (June 1997).
- 15 Rybolt, Teri, Manager of Facility Services, Lexis Nexis Corporation, personal interview (June 1997).
- 16 Miscovich, Peter, and Mary Hemer, "Space—The Next Generation," *Plant Sites & Parks Magazine* (January/February 1996).
- 17 Ibid.
- 18 Ibid.
- 19 Deatherage, Richard, General Motors Worldwide Facilities Group, personal interview (June 1997).
- 20 Ryburg.
- 21 Ibid.
- 22 Ibid.
- 23 Stivers, 1997.
- 24 Ryburg.
- 25 Ibid.
- 26 DowElanco Cuts Operating Costs in R&D Facilities, *FM DATA Monthly Online Edition* (November 1996), pp. 1–3.
- 27 Ibid.
- 28 Russell, James S., "A Company Headquarters Planned for Flexibility," *New York Times* (September 7, 1997).
- 29 Ryburg.
- 30 Nagamori, Gary, Manager of Facilities Planning, Chiron Corporation, personal interview, (June 1997).
- 31 Guth, Robert, Senior Manager, Work Space Provisioning, Nortel Technology, personal interview (June 1997).
- 32 Guth, 1997.
- 33 Ibid.
- 34 Nonkes, Bill, Manager of Churn and Engineering, Nortel Technology, personal interview (June 1997).
- 35 Ibid.
- 36 Nagamori, 1997.
- 37 Rybolt, 1997.
- 38 Ryburg.
- 39 Ibid.
- 40 Rybolt, 1997.
- 41 Ryburg.
- 42 Ibid.
- 43 Barber, Christine, "Alternative Officing: Where Are We Headed?," *Facilities Design & Management* (December 1996), pp. 38–41.
- 44 Ibid.
- 45 Ryburg, Jon, President, Facility Performance Group, Inc., personal interview (June 1997).
- 46 Ryburg, *New Churn Rates: People, Walls, and Furniture in Restructuring Companies*.
- 47 Ibid.