

Occupancy & Human Factors



The book explores the dual roles of facility managers, who act as both enhancers of organizational and individual occupant performance in the workplace and as leaders steering the fulfilment of the facility management organization's support mission. Through insightful practices and strategic guidance.



IFMA Facility Management Learning System

Book 3

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Human Factors

✦ Introduction

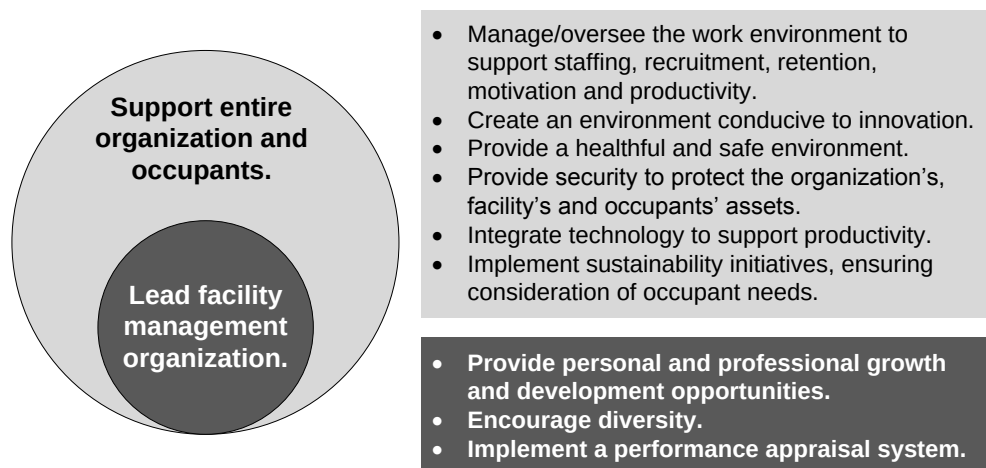
Role of facility managers as related to *Human Factors* competency

Facility managers play two types of roles that correspond to the two competencies within the *Human Factors* competency area. They:

- Support both organizational and individual occupant performance through the quality of the workplace that facility management helps create and maintain.
- Lead the facility management organization in fulfillment of its support mission by developing and implementing practices that support their performance.

Each of these roles implies mastering specific areas of knowledge and skills (the performance statements associated with each competency), as shown in Exhibit 3-1.

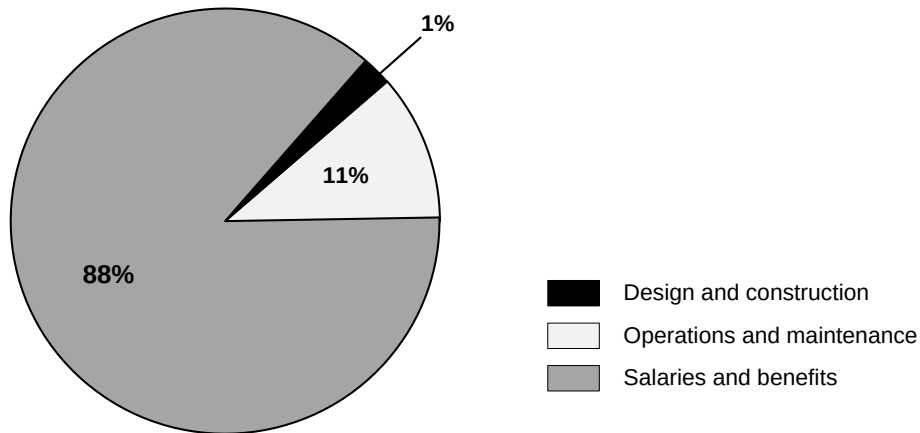
Exhibit 3-1: Facility Managers' Competency in Human Factors



The *Human Factors* competency views occupants and employees as a sustainable resource, as critical to an organization as energy and water resources, materials and processes. As Exhibit 3-2 shows, by far the largest cost component during the life cycle of a building is the salaries and benefits of occupants. (The breakdown of life cycle costs in this exhibit refers to a commercial building. Proportions will vary depending on the organization and its activities.)



Exhibit 3-2: Costs of a Commercial Building over a 30-Year Life Cycle



Source: National Institute of Building Sciences, as cited in “Defining High Performance Buildings for Operations and Maintenance” by Angela Lewis, David Riley and Abbas Elmualim, *International Journal of Facility Management*, Vol. 1, No. 2, 2010.

In some industries and business strategies, higher employee turnover may be desirable, but for organizations that rely on well-developed skills and expertise, employee retention and development are necessities.

To ensure that the needs of “people” are represented in sustainability programs, they are included in the guidelines of the Global Reporting Initiative (GRI), an international group that aims at helping organizations focus and measure their sustainable actions. (A link to the Web site for the Global Reporting Initiative is provided in the online Resource Center.)

The GRI guidelines focus on an organization’s responsibility to:

- Ensure a healthful, safe and secure workplace that reduces workplace injuries and supports productivity.
- Create a workplace in which occupants are engaged in their work.
- Exercise fairness in employment relations—achieving diversity, awarding livable wages and standard benefits, complying with international and local labor laws and labor contracts.
- Invest in improving human capital through performance management and training.

These guidelines correspond well with the competencies for the *Human Factors* area in IFMA’s global job task analysis. Facility managers hold the means and have continuous opportunities to help their organizations fulfill these responsibilities to occupants and employees while achieving their strategic



goals. This module on human factors focuses on the skills and knowledge facility managers will need to make the most of those opportunities.

Overview of Human Factors competency

Exhibit 3-3 provides an overview of competency contents.

Exhibit 3-3: Overview of Human Factors Competency

Chapter	Content
1. The Human Factor in the Workplace	- Defining an effective, efficient and expressive workplace - Facility and organizational issues that affect occupant and employee comfort in the workplace and in the work relationship - Understanding and managing occupants' reactions to change
2. Creating a Healthful, Productive Workplace	- Indoor environmental quality: - Indoor air quality, lighting, temperature, noise - Decreasing and managing hazardous materials - Supporting employee and occupant wellness: - Ergonomics - Stress management - Supporting productivity: - Supporting different types of work - Aesthetic qualities - Facility manager's compliance, documentation and reporting requirements
3. Creating a Safe and Secure Workplace	- Creating a culture of safety and security - Strategies to improve workplace safety - Strategies to improve organizational, facility and occupant security - Facility manager's compliance, documentation and reporting requirements
4. Employee Development	- Challenges and benefits of employee development - Aligning the organization's needs with workforce resources - Identifying job requirements - Managing performance through: - Communicating performance expectations - Training - Assessing performance and analyzing causes for performance gaps - Coaching and feedback - Reward and correction - Fostering employee professional development: - Ensuring facility manager professional development - Facility manager's compliance, documentation and reporting requirements
5. Performance Appraisal	- Purpose and types of appraisal systems - Performance appraisal meeting model and strategy for improving effectiveness of process
6. Managing for Diversity	- Defining diversity and understanding its benefits - Strategies for creating and managing a diverse team



Chapter 1: The Human Factor in the Workplace

After completing this chapter, students will be able to:

- Describe possible criteria that could be used to assess a workplace.
 - List organizational factors with which a facility manager should be familiar before implementing processes that affect occupants and employees.
 - Describe the possible impact of compliance requirements on facility management in the area of human factors.
 - Provide examples of how facility management processes can affect each of the five basic human needs as defined by Maslow.
 - Explain why occupants and employees may resist change.
 - List strategies facility managers may take to support occupants' and employees' acceptance and successful adoption of facility changes.
-

✦ Topic 1: Effective Workplaces

Defining an effective workplace

If the FM function is charged with supporting the development and maintenance of effective workplaces, the first logical question is, what is an effective workplace? This concept goes beyond the traditional goals of efficient space utilization and operations and maintenance practices.

The Commission for Architecture and the Built Environment (CABE) and the British Council of Offices proposed two frameworks for assessing the quality of a workplace. Although the commission was focusing specifically on offices, these frameworks apply to all types of workplaces, including educational, retail and manufacturing facilities.

One framework was the balanced scorecard, an assessment tool that combines different perspectives—people, customers, processes, finance—to provide a more holistic analysis. (The balanced scorecard is discussed in the *Leadership and Strategy* competency.) A workplace is effective to the degree that it fulfills the needs and expectations of its occupants and visitors (including customers), supports work processes so that performance goals can be met, and does all this in a cost-effective manner.



The second analytic framework derived from the work of Francis Duffy, the founder of the firm DEGW (now the Strategy Plus group within AECOM). Duffy proposed that a workplace that truly “works” is one that balances efficiency, effectiveness and expression, which are referred to sometimes as the “three Es”:

- Efficiency refers to optimal use of the workspace from a cost perspective.
- Effectiveness refers to the degree to which the workplace supports productivity by enabling occupants’ performance.
- Expression refers to the way in which the workplace articulates the values and goals of the organization and its members.

These similar assessment approaches suggest the complexity of human needs that the facility must address. For an organization to achieve its strategic goals—both the organization as a whole and the FM organization in particular—occupants require necessary physical comfort (e.g., comfortable temperature and humidity, adequate lighting, fresh air) and work satisfaction. Work satisfaction can include control over work life and workspace, engagement in work, the opportunity to be creative and a sense of pride in the workplace and organization.

While the organization exerts a larger influence on cultural values, policies and practices that affect workplace satisfaction, FM can play an important role in creating effective workplaces. FM can ensure comfortable workplaces and support organizational strategies to promote employee engagement and creativity. FM can also work to create a similar culture of engagement within FM itself.

This chapter describes the human factor in the facility, what humans need to thrive at work. Following chapters examine facility management strategies to respond to these physical and emotional human needs by supporting a healthful, clean, productive, safe and secure workplace and by creating a positive employee relationship.

Aligning FM practices with the organization’s strategy, culture and values

A recurrent theme in all of the modules in the IFMA Facility Management Learning System is the need for facility managers to understand their organizations’ cultures, values and strategic goals so that they can better align their function’s practices with the organization’s abilities and aspirations. This is true in the *Human Factors* competency area as well.



Before planning processes that affect human factors (or are affected by human factors), facility managers should become familiar with:

- **The organization's strategic plans.** For example, experts frequently cite the appeal of the facility as a factor in recruitment. Investing in the type of facility that would appeal to targeted employees could be a priority for a knowledge organization that relies heavily on workers with specific skills.
- **Cultural factors that may shape processes.** An organization that values equality and inclusiveness will be more interested in processes that engage occupants. An organization that is hierarchical and has a history of controlling information and limiting employee input will probably resist more flexible space planning. Cultural factors may encompass occupant/worker demographic characteristics as well, including generational differences, ethnicity and socioeconomic positions.
- **Historical factors that may affect occupant/employee attitudes.** For example, occupants who have been through reorganizations, layoffs or poorly planned renovations may be skeptical of and therefore resist any facility change, even changes that may improve productivity.
- **Specific stakeholder needs.** An organization that has a history of environmental and/or safety issues with regulatory agencies may need to focus less on cost savings and more on increasing facility safety and safe environmental practices.
- **Organizational resources.** A facility management group that operates with a small training budget and a lean staff may have to find more creative ways to develop the group's expertise and talent—perhaps by relying on local training opportunities, mentoring and special projects.

So, as with other competency areas, facility managers should begin any work in this area by developing a deeper awareness of how the organization relates to its occupants and visitors now, where it has been in the past and what it wants to be in the future.

Compliance issues Facility managers are well aware of compliance obligations related to, for example, building codes and signage, fire detection and suppression systems and indoor air quality. (For more information about this issue, read about assessing the facility's needs in the *Operations and Maintenance* competency.)

Compliance is a challenge in this competency area as well. FM must be aware of and comply with national and local laws and regulations and with the



requirements of individual employment contracts and agreements with workers councils or labor unions.

Facility managers need to understand how these laws and regulations affect their facilities' layout and operation. For example, some laws may specify the maximum distance between workstations and exterior windows, or they may require employers to provide nursing areas for working mothers.

As a manager of FM staff, facility managers need to be aware of other compliance demands, such as antidiscrimination measures, training and accommodation requirements and complex worker health and safety requirements. Most countries, as well as regional and municipal governments, have numerous laws that regulate the health and safety of working conditions and that shape the employment relationship, including issues of fairness in hiring and training.

Facility managers may be responsible for monitoring and documenting facility conditions (e.g., control of hazardous materials, testing of fire suppression systems) and for logging and reporting workplace injuries. There are also issues of organizational liability for harm suffered by occupants while in the facility, with substantial civil and possibly criminal penalties.

✦ Topic 2: The Need for Comfort

Discussion throughout this competency returns to the same goal: FM's commitment to supporting both occupants and staff in the workplace. The starting point in developing strategies to achieve this goal is understanding the concept of comfort, which applies to both physical needs (discussed in Chapters 2 and 3 on creating healthful, productive, safe and secure work environments) and the emotional needs associated with work (discussed in Chapters 4, 5 and 6 on the employment relationship).

Humans seek comfort, especially in times of stress. Comfort is a sense of satisfaction with one's current state. Things feel right. There is no need for corrections or changes.

Comfort appears to be an essential ingredient of productivity. Numerous studies have shown that occupants are not as productive when they are physically uncomfortable. Speed slows, error rates increase and attention spans decrease.

Comfort, however, is not just physical. It has emotional and cognitive dimensions as well. Occupant productivity can be affected by confusion about



expectations, inadequate direction or support, and harassment from supervisors or other occupants.

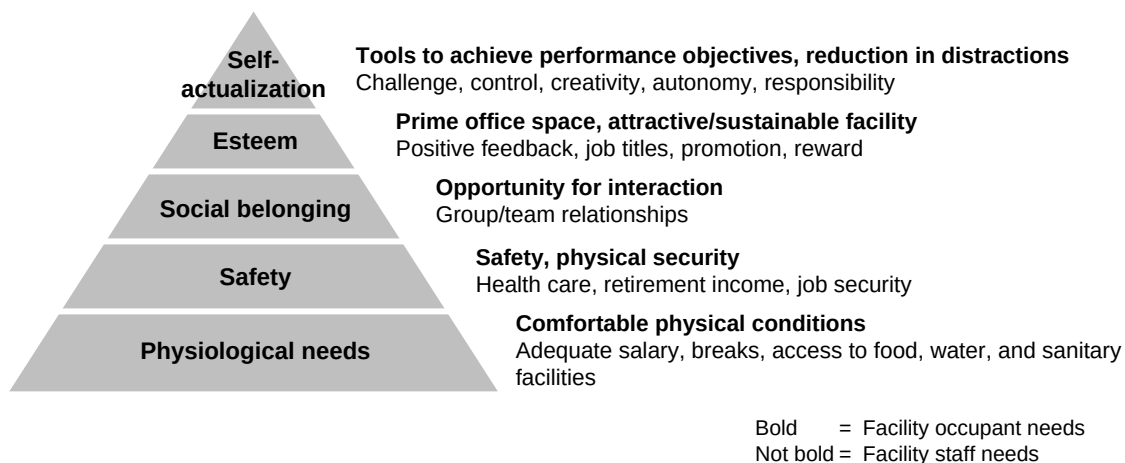
Therefore productive workplaces are effective at accommodating the wide range of occupant needs that result in comfort—from obvious physical requirements to more subtle issues related to social and emotional comfort.

The work of the psychologist Abraham Maslow can provide a better understanding of the kinds of factors that contribute to comfort. (Maslow’s “hierarchy of needs” is discussed in the context of motivation in the *Leadership and Strategy* competency.) Facility design consultant Derek Clements-Croome used Maslow’s hierarchy of needs to describe the range of occupant comfort requirements.

Exhibit 3-4 shows the type of occupant/employee needs that correspond to each of Maslow’s five levels:

- Physiological
- Safety
- Social belonging
- Esteem
- Self-actualization

Exhibit 3-4: Maslow’s Hierarchy of Need and Occupants



For each level, needs can be seen from the general perspective of a facility occupant (the bold text) and from the more focused needs of FM staff. More than any other function, FM owns the mission to consider and address occupants’ needs. And like any other line function, FM has a responsibility to



manage its employees in a way that supports the organization's strategy and values.

A facility manager must be able to maintain these two perspectives while developing and implementing the FM strategy, supporting the tools and environment occupants need to achieve the different aspects of comfort in their work lives while creating an employment relationship that meets both FM's and FM staff's needs.

These essential human needs are discussed in more detail below.

Physiological comfort

From an occupant's perspective, a physiologically comfortable facility is one in which:

- Temperature ranges are appropriate for the type of work and the culture. Studies have shown that performance declines measurably when temperatures deviate significantly, either up or down. Temperature preferences also vary by individual.
- There is adequate ventilation and control of humidity.
- Lighting levels are appropriate to the type of activity in an area. There is no glare, which can be simply defined as unwanted brightness, either direct or indirect.
- There is an adequate and appropriate level of cleanliness.
- Noise levels are controlled.

Did You Know?

Temperature tolerances or preferences vary by climate and culture. For example, recommended room temperature in China is 26°C (Celsius), or 79°F (Fahrenheit), while in the U.S. the norm might be 23°C (about 73°F). It is interesting to note that Chinese hotels serving foreign visitors bend the mandatory standard and keep the temperature closer to 23°C.

From an employee's perspective, a workplace provides physiological comfort through:

- **Fair and adequate salaries.** These can be used to satisfy the physiological needs of employees and their families for shelter and food. Sustainable organizations commit to the principle of adequate pay for their own employees and for the employees of their suppliers or vendors.



- **Reasonable hours.** What is “reasonable” may also vary by culture and type of work. Employees are not asked to perform excessive amounts of overtime on a regular basis. The physiological needs of shift work are accommodated through careful scheduling.
- **Breaks for meals, rest and sanitary purposes.** Organizations can increase physiological comfort by including occupant/employee cafeterias and subsidizing their costs to support lower prices.
- **Managing stress levels.** Workplace stress is discussed in more detail in the next chapter, but facility managers should be aware that high and continuous levels of stress produce physical, emotional and cognitive damage, affecting both employee health and productivity.

As a function leader, a facility manager can work with management and other functions to provide a workplace that answers employees’ physiological needs.

Safety

Both occupants and employees need to know that they are not risking their current and future health and well-being while at the facility. For both occupants and employees, this level of comfort means that a facility:

- **Ensures a healthful physical environment.** This aspect of comfort is particularly important to facility managers when one considers how much time individuals spend in buildings, either working or visiting. Both European and U.S. health agencies estimate that their residents spend about 90 percent of their days indoors. The ingredients of a healthful workplace are discussed in the next chapter.
- **Ensures a safe and secure environment.** In this environment occupants will not be vulnerable to accidents caused by negligence, violence or theft.

An employee’s safety needs focus on future security:

- To what degree can the employee depend on having a job in the immediate future?
- What happens after the employee can no longer work? Are retirement and disability income supported in some way?

Social belonging

This aspect of comfort recognizes the facts that humans are, for the most part, social creatures and that they spend a great deal of their lives at work. A comfortable facility is one that facilitates interaction, both formally (in scheduled meetings) and informally (in unscheduled meetings or encounters not related to work at all). Interaction can be inhibited by physically separating team members.



One workplace discovered that, because of where team members were located in the building and because of the complexity of routes within the facility, some employees interacted more often with team members in a facility 40 miles away than they did with teammates in the same building. Another workplace found that by decreasing the size of a cubicle, they were able to accommodate an increasing workforce, but there was no longer enough space in the cubicle to support informal chats that were key to team cohesion and project work. The facility needed to redesign its use of space to provide this important dimension of workplace activity.

A sense of belonging can also derive from an ability to brand one's own workspace—for example, by posting pictures or drawings. This poses the inevitable conflict between occupant expression and workplace image. In an organization that relies on alternative work strategies, occupants may not have a designated space that they can customize. FM may become involved in negotiating solutions to these conflicts.

Social belonging also affects the supervisory relationship. As a manager of people, facility managers should be aware of:

- New employees' needs to form connections and become part of the group.
- Obstacles toward forming social work connections for employees working from remote locations.
- Opportunities to increase unit cohesion through team projects.

Esteem

Esteem is a feeling of self-worth. It can have internal and external dimensions, deriving from a sense of accomplishment but also from the perceptions of others. These perceptions may be influenced by one's accomplishments but also by associations with highly regarded people, places or things. For example, esteem can be self-confidence based on a record of having completed difficult projects successfully. This performance is recognized by the organization. Perhaps the high-achieving employee gains access to certain decision makers and gets a better office or parking spot. The result is that the employee gains esteem in the eyes of co-workers.

From an organizational perspective, occupants' and employees' esteem can be supported in two ways that directly affect facility managers: through the "branding" of the facility itself and through providing opportunities and recognition of accomplishments.

Facility "branding" attempts to project an organization's values and priorities onto the spaces it creates. The branding communicates this identity to those outside the



organization but also to those inside the organization. It invites occupants to share an organizational identity. The organization gains esteem and the occupant shares that esteem. Many occupants describe the pride they take in going to their workplaces, which may be distinctively clean and well-appointed bank offices or surprising and imaginatively challenging software development or advertising firms. The age and condition of work surroundings can motivate or demoralize occupants.

FM should be advised to involve occupants in facility branding projects. If changes do not align with a function's own sense of itself or interferes with its work, the project can diminish a function's esteem. Jean Neumann, an organizational consultant, tells a story about a government legal department that was moved into a new facility, a striking high-rise building. Probably senior managers thought the attractive building was enough to nurture their lawyers' self-esteem. They were wrong. When the lawyers moved into their new office, they found they had lost their private offices, furniture was bolted to the floor and couldn't be rearranged. The carpeting color was chosen to distinguish this floor from the other floors in the high-rise; unfortunately, it was red. The department experienced a 30 percent turnover rate in the period leading up to and following the move.

The case study below describes how British Petroleum (BP) branded its facilities according to the organization's brand values.

BP Case Study

BP committed to creating workplaces that reflected the organization's commitment to performance, innovation, progressiveness and sustainability. Ernie Pierz, Director of Projects for Integrated Supply and Training, explained, "The idea is that if I walk into an office in Johannesburg, Mexico City or Chicago, I will say, 'This feels like a BP office.'"

To achieve the objective of branding its workplaces, BP took a range of actions, including the following:

- Sustainability—Facilities use recycled carpet and sustainable wood products. Energy use is monitored.
- Workplace characteristics—Space is assigned by function, not hierarchy. All employees, including management, use public workstations. Collaborative spaces of various types and sizes are provided—from phone booths, small huddle rooms and cafes to "smart" conference rooms with LCD projectors, full voice/data connectivity and electronic whiteboards. Distributed work is supported through policy and processes, and touchdown spaces are allocated to those who opt to work remotely.
- Services and amenities—Occupants use Voice over Internet Protocol (VoIP). Amenities include cafeterias, exercise centers, concierge service, shops and services such as dry cleaning.



In terms of the supervisory relationship, self-esteem often motivates employees to work more productively and with more attention to quality. Employees derive a sense of esteem in different ways. The *Leadership and Strategy* competency describes how individuals are motivated in different ways. Managers should aim at understanding what drives their employees. Not all employees are motivated by financial rewards. Some may seek recognition at meetings or positive feedback delivered privately. Some may value a plaque or award. Others may want opportunities to demonstrate their ability.

Facility managers can fulfill their staff's need by finding the right way to motivate individuals and by:

- Communicating regularly and sharing information that reflects management's perspective.
- Recognizing individual and team contributions regularly and providing appropriate rewards.
- Enhancing the FM image within the organization. FM can sometimes be seen more as a “servant” and less as a “service provider”—especially when FM is an outsourced service. Managers should be aware of this challenge and develop creative ways to influence perception of the function and its staff.

Self-actualization

Self-actualization is a vague-sounding term, but it refers to a real and profound human need: the need to grow, to become as good in one's chosen field as one's abilities will allow. From the perspective of the facility's occupants, self-actualization means having the tools they need to do their best work—whether this is digital access, team project space, access to copiers and printers or a quiet space free of distractions.

From the perspective of FM staff, self-actualization means encouraging employee development. This can include:

- Helping employees identify their strengths and weaknesses.
- Providing training and development opportunities to help them achieve their work and personal goals.
- Creating opportunities for staff members to gain experience and progress in their job responsibilities.

Self-actualized workers require investment, but the investment can yield staff who are self-starters, require little supervision and are strongly motivated to perform and succeed.



✦ Topic 3: Humans and Change

The problem of change

There is an irony in the fact that facility managers must usually implement changes to improve the way the human factor is addressed in facilities. The irony is that, unless conditions are very bad, change is often perceived in a negative way.

The U.S. town of Xenia in the state of Ohio was heavily damaged by a tornado in 1974. The community was so attached to the way things were that they rebuilt the town exactly as it was—ignoring ample opportunity to improve land use and planning. They wanted their town back as they remembered it.

Contrast Xenia with another city in the U.S., Greensburg, in the state of Kansas. After a 2007 tornado, about 95 percent of the city was destroyed and the remaining five percent heavily damaged. The city council passed a resolution that all new municipal buildings would be designed to meet LEED platinum standards, the highest sustainability criteria used in the U.S. Green Building Council's certification system. The city Web site boasts that it has the highest number of LEED-certified buildings per capita in the world.

There are many differences between the two cases: the level of destruction was much greater in Greensburg, and the 30 years since the Xenia tornado had introduced promising sustainable building technology. However, it is worth noting the role that the leaders of Greensburg played. They recognized and were able to persuade city residents about the opportunities that a changed Greensburg offered.

This is the challenge for FM. Without managing attitudes about change, facility managers can waste valuable time and resources. Facility managers must anticipate and plan for possible occupant or staff loyalty to the past and resistance to future change—no matter how worthwhile the changes may seem to facility managers. They must be prepared to show the positive side of change.

The process of leading change in FM teams and processes is discussed in the *Leadership and Strategy* competency. This topic focuses on understanding why occupants and staff may resist change so that FM can develop better strategies to introduce changes in the facility and its processes.



Why do occupants resist change?

Humans' resistance to change is understandable, because some aspects of change violate humans' comfort needs. The psychologists Leila Scannell and Robert Gifford propose that attachment to familiar surroundings is driven by a basic need for a sense of security and survival. In a familiar facility setting, occupants know what resources are available and where they are. This knowledge imparts a sense of confidence that a job can be accomplished. The sense of confidence feeds a willingness to explore and try new processes that may benefit the organization as well as the individual. After all, if the exploration does not work out, the familiar place is still there, offering the same support.

People are also driven by emotional attachments to a place, such as pleasure in shared history in a particular facility or pride of association with what a facility represents. Computer and peripherals manufacturer HP invested considerable time and money in preserving and achieving historical status for the garage at 367 Addison Avenue in Palo Alto, California, where Bill Hewlett and Dave Packard started their business.

There are also cognitive issues that affect perceptions of change. People rely on known markers and familiar processes to understand the world around them more efficiently. Think about a cluttered desk that a co-worker refuses to tidy up because he or she knows exactly how to find a particular paper amidst the chaotic mess. This is possible because this person has created a mental map, using as markers different piles of papers and books or coffee cups or framed photos. Eliminate or move any of these markers, and the map disappears. The person has to waste time actually examining everything to find the necessary document.

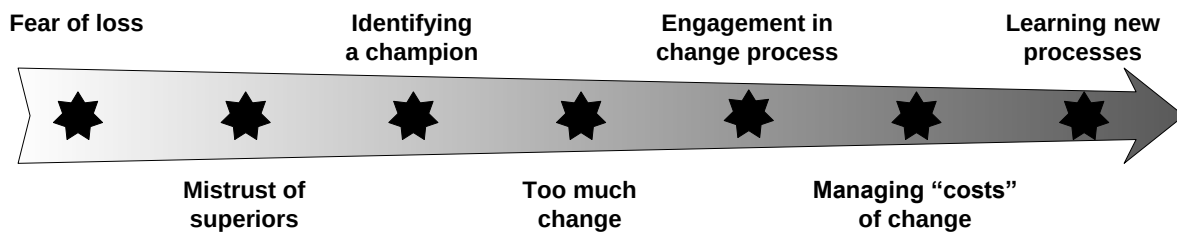
Another example is the way in which the introduction of new time-saving, efficiency-boosting technology usually has the opposite effect in the period immediately following the change. Not only do workers need to learn new processes, but they must deal with the stress of lost confidence in their performance, lost productivity and ever-increasing backloads of work. The same phenomenon occurs when an employee is given a new responsibility. The employee development intention is sound, and the employee probably welcomes the challenge. However, the change will cause stress and diminished productivity during the transition period—and beyond this period if the facility manager fails to ensure that the employee has been given clear responsibility and been provided with the necessary tools to do a good job.



How facility managers can support change

FM must plan for these possible emotional and performance effects when introducing change in the facility and its processes. Environmental psychologist Jacqueline Vischer has compared occupants' experiences with change to Elisabeth Kübler-Ross's stages of grief. Vischer transposes the stages of grief onto the process of adapting to change. The steps are shown in Exhibit 3-5. Note that these stages may not always unfold in this order. Many steps may happen almost at the same time.

Exhibit 3-5: Stages of Occupant Reaction to Change in Facility Space and Services



FM can use this model to develop a change strategy, anticipating and accommodating common occupant responses.

Consider how these stages of occupant reactions can affect the implementation of an FM project. A facility manager has to consolidate printer/copy centers to provide more space for team meetings. There had been a center on each floor. Now there will be one for every three floors.

The facility manager can help implement this change by supporting occupants through this process:

- **Fear of loss.** FM anticipates possible reactions. The change means that occupants on two out of every three floors will have to travel between floors to make copies or send/receive faxes. Occupants may also worry that the new centers will be more crowded. Users will have to wait for available copiers. Occupants in neighboring workstations will experience more distractions. To manage this change, FM does some research and plans how to accommodate customary volume. Sites are assessed with awareness of the potential for distraction to neighbors. FM meets with departments to understand fully their use of the stations.
- **Mistrust of superiors.** FM meets with the affected occupants to announce the proposed change, providing as much information as possible about the change and the need it addresses, how the change can benefit the



occupants, and how the occupants' needs have been considered. FM asks for input and shows willingness to negotiate solutions.

- **Identifying a champion.** FM notes during meetings that certain occupants are well-regarded by their co-workers and often express the groups' reactions. FM makes an effort to speak with these individuals and ensure that they understand the change and have the correct information to share with their co-workers. FM asks them also to provide feedback about how departments are viewing the change.
- **Too much change.** The occupants begin to see how much of their work lives this change will affect. They anticipate more and more problems. FM checks in often with additional information and promises that the occupants will be involved in the change process.
- **Engagement in change process.** As planning for the change proceeds, FM conducts brief lunchtime meetings to gather reactions and ideas. The discussions help establish the occupants' priorities and test possible approaches. FM works with department heads to provide small desktop printers/copiers for certain people who use that service with great frequency and urgency. FM also develops a process for periodic collection and filling of copying requests. The engagement strategy is especially effective because it appeals to one of the basic needs of occupants and employees—control over one's environment and work.
- **Managing the “costs” of change.** Once the change is implemented, occupants begin to identify specific effects of the change on their work lives. Again, FM focuses on gathering feedback so that occupant needs can be quickly identified and addressed.
- **Learning new processes.** The change has been successfully implemented. Occupants have adopted new habits, routes or processes to respond to the change in the facility. FM meets internally and with department heads to debrief the change and find ways to improve the process of introducing facility change in the future.

Exhibit 3-6 offers some advice on what to do and what to avoid during the change process.



Exhibit 3-6: Recommendations for Making Facility Change

Do	Avoid
Face possible conflict head on and engage with those affected. Provide as much information up front as possible. Focus on the reasons for change and benefits to the organization. Listen to occupants and provide support if possible. Negotiate solutions if necessary. Engage occupants by gathering input through questionnaires and focus groups. Use post-occupancy evaluations to identify unanticipated effects and take steps to address them. Debrief the experience to improve FM processes.	Ignoring occupants' reactions to change, including their emotional responses. Lying, overpromising or engaging in unfounded optimism (e.g., how long the project will take, how much disruption it will produce). Asking open-ended questions when seeking occupant input. This can invite occupants to compile lists of wishes, most of which cannot be fulfilled. When management fails to respond to these wishes, occupant reaction can further deteriorate.



Progress Check Questions

Directions: Read each question and respond in the space provided. Answers and page references follow the questions.

1. A workplace's ability to support productivity by enabling occupants' performance is a measure of its
☐ a. efficiency.
☐ b. excellence.
☐ c. effectiveness.
☐ d. expression.
2. A high-tech consumer products company has determined that its facility must attract and appeal to the younger workers it needs to develop cutting-edge products. This is an example of which organizational factor?
☐ a. Strategic plans
☐ b. Historical factors
☐ c. Stakeholder needs
☐ d. Organizational resources
3. List three compliance areas that can affect facility managers' responsibilities for human factors.

4. Why do occupants tend to resist change in their environment? (Choose all that apply.)
☐ a. Their knowledge of a familiar setting imparts confidence.
☐ b. They are driven by emotional attachments to place.
☐ c. They equate all environmental change with loss of status.
☐ d. They rely on markers and schema to work more efficiently.
5. Following are the stages in how occupants may react to facility change in space or services. Number each stage so that they are presented in the proper order.

 a. Managing "costs" of change

 b. Too much change

 c. Learning new processes

 d. Fear of loss

 e. Engagement in change process

 f. Identifying a champion

 g. Mistrust of superiors



Match the comfort requirement or solution on the left with the correct type of human need from Maslow's hierarchy of needs.

	Comfort requirement	Maslow's needs
_____	6. Employees require reasonable hours, without excessive overtime and with careful scheduling of any shift work.	a. Physiological
_____	7. Employees require an environment that facilitates both formal and informal interaction.	b. Safety
_____	8. Occupants require an environment in which they will not be vulnerable to accidents caused by negligence, violence or theft.	c. Social belonging
		d. Esteem
		e. Self-actualization

	Comfort solution
_____	9. FM includes personal development plans in annual staff performance meetings.
_____	10. Facility managers can help provide digital access, team project space, access to copiers and printers and a quiet space free of distractions.
_____	11. A certified sustainable facility can help meet this need by expressing shared values.

12. In order to help occupants through the change process, a facility manager created and distributed questionnaires asking their priorities among several conditions affected by the change. Which of the following steps in the process was this meant to support? (Choose one.)

- () a. Engagement in change process
- () b. Identifying a champion
- () c. Managing costs of change
- () d. Fear of loss



Progress check answers

1. c. Effectiveness refers to the degree to which the workplace supports productivity by enabling occupants' performance. (p. 3-5)
2. a. Strategic plans (p. 3-6)
3. Compliance requirements affecting human factors and facilities could include any of the following:
 - Regulations regarding health and safety of working conditions
 - Fairness in hiring and training
 - Monitoring and documentation requirements
 - Liability concerns regarding harm suffered by occupants while in the facility (p. 3-6)
4. a, b, d. While some changes can be associated with loss of status, sometimes even positive changes are resisted. (p. 3-15)
5. The correct order is d, g, f, b, e, a, c. (p. 3-16)
6. a (p. 3-9)
7. c (p. 3-10)
8. b (p. 3-10)
9. d (p. 3-13)
10. e (p. 3-13)
11. d (p. 3-11)
12. a. Asking occupants about their own preferences and priorities is a way of engaging them in the change process. (p. 3-17)



Chapter 2: Creating a Healthful, Productive Workplace

After completing this chapter, students will be able to:

- Provide examples of the effects of poor workplace quality on occupants' health and productivity.
 - Define the components of indoor environmental quality.
 - Describe common facility conditions and practices that affect facility indoor air quality.
 - List facility management strategies to improve indoor environmental quality.
 - Describe the benefits of managing facilities proactively to promote occupant wellness.
 - Describe possible causes and effects of stress in the workplace.
 - Define musculoskeletal disorders and causes associated with workplace conditions.
 - Provide examples of facility management strategies to promote occupant wellness.
 - Contrast the benefits and challenges associated with decreasing facility footprint.
 - Describe the needs of the workplace in knowledge-oriented organizations.
 - List examples of strategies to manage space for greater effectiveness and efficiency.
 - Describe ways to implement distributed work strategies more effectively.
-

As Derek Clements-Croome has commented, "The physical environment can enhance one's work, but an unsatisfactory environment can hinder work output." There have been numerous studies about the effect of the workplace on productivity, and they must be judged carefully in terms of their scientific merit. However, it is safe to say that there is ample evidence that the quality of the physical workplace has a direct effect on the quality and quantity of the work performed there.

Physical discomfort can result in additional costs or resource demand to the organization. It distracts one's attention, leading to decreased work output, slower rates of work, higher incidence of errors and, in general, less-effective cognitive processes that can affect problem solving and innovation. It can also lead to increased sickness rates and absenteeism.

Studies on facility environments reflect IFMA data, focusing on certain ingredients for a productive workplace, the most common of which are:

- A comfortable temperature and the ability to control temperature.
- A comfortable and healthy level of humidity.
- Fresh air and the ability to control volume and rate of air supply.



- Adequate lighting and the ability to customize lighting to individual needs.
- Environmental factors that promote concentration (e.g., noise control, privacy) but also provide distraction through visual stimulation or physical exercise.
- Flexible use of space that supports both individual and group activities and both task and social interaction.

It is important to note in the list above the qualities of control and variety. An effective workplace is designed to flex, as much as is practical, to the needs of individual occupants.

Did You Know?

Effective workplaces should engage all of the senses and appeal to aesthetic needs for beauty and order. These sensory experiences offer momentary, “recharging” distractions. The KI Building in Tokyo, for example, uses a fragrance diffusion system in the building’s atrium and music based on the natural environment.

This chapter focuses on three factors that affect workplace productivity and strategies facility managers can implement to support occupants and employees:

- Indoor environmental quality (IEQ)
- Occupant and employee wellness
- Workplace spatial design

For more information about FM tactics to create IEQ and productive workplaces, learners should refer to the *Environmental Stewardship and Sustainability* competency.

✦ Topic 1: Indoor Environmental Quality

IEQ components

The term *indoor environmental quality* (IEQ) refers to the strategies and systems used to provide occupants with a healthful, comfortable and safe workplace. IEQ is a consideration in most sustainable building certification or ratings systems (e.g., LEED). Improved IEQ correlates with lower rates of respiratory infections and headaches. It supports higher rates of productivity and concentration needed for complex tasks.

Workplace environmental quality is influenced by culture, local practices, work equipment or process requirements, and, in some countries, by laws and



building codes. For example, expectations of cleanliness may vary by culture and industry. The presence of certain equipment (e.g., computer servers) may necessitate lower humidity levels. National energy consumption guidelines may require certain setpoints in workplaces. Worker safety laws may require monitoring, documenting and reporting of workplace conditions. Building codes may require that ventilation systems are designed to meet specific oxygen and carbon dioxide levels. It is FM's responsibility to ensure that all of these influences and requirements are reflected in the facility strategy for creating IEQ.

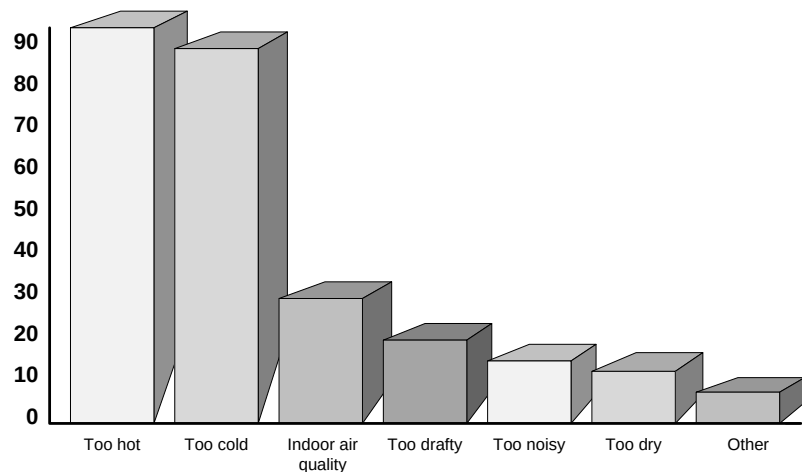
IEQ generally focuses on:

- Temperature and relative humidity.
- Indoor air quality.
- Lighting.
- Noise.
- Cleanliness.

Temperature and humidity

IFMA surveys its members to identify the top workplace complaints among facility occupants. Exhibit 3-7 shows the results that, year after year, appear at the top of the list. The vast majority of occupant complaints tend to be about the difficulty of achieving a comfortable temperature. The fact that most facilities report receiving complaints that the facility is *both* too warm *and* too cold underscores how difficult it is to deliver thermal comfort to all occupants. (Note that the survey is conducted only in the U.S.; responses might be different in other regions.)

Exhibit 3-7: IFMA Survey of Facility Occupant Complaints in the U.S.



Based on 2009 data



The sensation of temperature is affected by factors besides air temperature, such as air movement and relative humidity:

- Air movement can increase the body's loss of heat through evaporation. During warm weather, fans moving air across an occupied area transport heat from the occupants and support a sense of comfort. During cooler weather (or in air-conditioned spaces), occupants may perceive moving air as a draft that produces chilly discomfort.
- Relative humidity refers to the percentage of water vapor in the air at a given temperature compared to the maximum amount of water vapor that could be held at the temperature. The higher the humidity during the cooling season, the more difficult it is for the body to shed heat through evaporation. Conversely, maintaining a certain level of humidity during the heating season enhances a feeling of comfort. It is generally agreed that a relative humidity level of 50 percent will provide the greatest comfort levels. Humidity level can also be a factor in indoor air quality, as seen the next section. It can also interfere with productivity, since high humidity levels can cause problems for electronic equipment (e.g., computers, servers, VoIP telephones).

Comfort can also be affected by wide swings in temperature that distract occupants from their work and drive them to seek temporary comfort—by putting on a sweater or turning on a small fan. Therefore one of the goals in facility HVAC systems is to maintain a steady temperature—for example, a range of two degrees above or below the temperature setpoint and five percent above or below the desired relative humidity.

The ideal temperature setpoints for a facility can depend on many factors, including the type of facility, the activities occurring there and the expectations of occupants. As discussed in Chapter 1, definitions of acceptable workplace temperatures can vary by geography and culture. Individual facility structures and HVAC systems may present challenges as well. The best course for FM may be to ensure awareness of any workplace regulations regarding temperature and humidity and to check in with occupants to assess satisfaction with indoor climate.

Soliciting occupant input also supports the idea of individual occupant control of temperature. As noted in Chapter 1, the feeling that one can control one's environment and work is an important component of comfort. Since individual control conflicts with the way most HVAC systems are designed and since individual thermal comfort needs can be very different, delivering occupant



control of temperature is obviously a challenge for facility managers. The challenge can be met, at least partially, by implementing occupant surveys that assess satisfaction with temperature, ventilation and humidity; reporting survey results to occupants; acting on occupant complaints and needs; and communicating those actions to occupants.

Indoor air quality

Indoor air quality (IAQ) refers to both the quantity of fresh air and the quality of air within the facility.

The quantity of air is affected by the facility's ventilation system and the amount of fresh air that is mixed with facility air to reach an appropriate level of carbon dioxide and to moderate the amount of pollutants in the air.

Minimum and maximum levels may be defined by local codes or regulations. The quantity of fresh air in modern facilities has been directly affected by the costs of conditioning facility air (which increase with the addition of outside air, although this can be managed through certain sustainable operating strategies and equipment) and the trend toward tighter building envelopes and fewer operable windows. (One should note here that the lack of operable windows also decreases occupant control.)

The quality of facility air refers to the levels of pollutants present in facility air: high levels of carbon dioxide, carbon monoxide, ozone and other gases; volatile organic compounds; bacteria, viruses and mold spores; odors; dust and toxic substances, including asbestos. IAQ can be affected by a number of factors, including:

- **Facility equipment and processes.** For example, some propane-fueled facility maintenance equipment can emit carbon monoxide, which can be toxic at certain levels and can affect mental acuity. Certain cleaning products and pesticides may contain harmful chemicals, many of which are masked by fragrances that can aggravate occupant allergies and sensitivities. Active leaks caused by poorly maintained HVAC equipment and wet carpet cleaning processes can contribute to the growth of mold. Poor cleaning processes can lead to increased dust levels.
- **Facility furnishings.** Paints, glues and coatings can emit volatile organic compounds (VOCs), which can irritate mucous membranes, impair memory and cognitive processes and cause headaches and, in extreme cases, liver damage. New furniture and carpeting are especially problematic outgassing sources.



- **Occupants.** The individuals who occupy spaces add to odors (natural and perfumed), bacteria and viruses in the air. They also increase the area's relative humidity and carbon dioxide levels. Higher humidity can promote odors and mold.
- **External environment.** Facility air quality can be impaired by poor outdoor air used in makeup air supplies. High levels of ozone caused by heavy automobile use and seasonal dust and pollen both may have a negative impact on building occupants and facility HVAC equipment.

The term *building-related illness* (BRI) was first used by the U.S. Environmental Protection Agency to describe illnesses caused by exposure to environmental agents in a building's air that cause identifiable symptoms of diagnosable illness. BRI can be caused by exposure to:

- Excessive levels of carbon monoxide and carbon dioxide.
- Toxic substances such as asbestos and radon.
- Bacteria, viruses and fungi (and the mycotoxins fungi produce).

Legionnaires' disease, a type of bacterial pneumonia, is a notorious example of a BRI. The bacterial strain, *Legionella pneumophila*, is named after the event that led to its identification. An outbreak caused 29 deaths at an American Legion convention in Philadelphia, Pennsylvania, in 1976. The outbreak was eventually traced to the hotel's drinking water system. However, other facility sources of legionella include cooling towers, hot and cold water systems, spa pools, humidifiers and potting soil. The World Health Organization considers facilities such as factories, shopping centers, hospitals, hotels and leisure or sports clubs as major reservoirs of the infection that contribute to its spread in the local community and globally as hotel guests travel.

The cumulative effect of insufficient fresh air supply, indoor and outdoor pollutants and airtight buildings can also create sick building syndrome. In a "sick" building, occupants experience acute health and comfort effects that appear to be linked to time spent in the building but cannot be associated with an identifiable illness or cause. This area is problematic for FM, since occupant complaints may be motivated by factors other than genuine illness. However, sick building syndrome has been shown to cause high rates of absenteeism, diminished productivity, higher premiums for health care insurance and legal costs and damages—complainants have won damages for health effects attributed to sick building syndrome. The best practice is to be aware of the potential for problems, create policies and processes to avoid them and work with HR or department heads to identify trends in illnesses.



Lighting

Adequate lighting means that:

- Lighting levels are appropriate to task and surroundings. For example, detailed work requires higher ambient lighting. For those working at computers, eyes tire more quickly if the pupils must constantly adjust to differences in brightness between the screen and the workstation's surroundings. Luminance is measured in foot-candles or lux, the metric equivalent. Exhibit 3-8 shows recommended illumination levels for different activities and spaces. Various bodies—such as the Illuminating Engineering Society (IES) or the International Code Council (ICC) publish official lighting standards. One example is ANSI/ASHRAE/IESNA Standard 90.1. In addition, each organization may develop its own standards for its specific workplace types. FM should be aware of these standards.
- Lighting is sourced in such a way as to avoid glare, any excessively bright source of light within the visual field that creates discomfort or loss in visibility.
- Lighting design incorporates natural light (without introducing glare) as much as possible. The wavelengths in natural light complement those in artificial light and more fully satisfy human needs.

Exhibit 3-8: Lighting Recommendations for Sample Spaces and Tasks

Space	Foot-Candles	Lux
Open office	30	323
Private office	50	538
Printed tasks	30	323
Conference room	30	323
Videoconference room	50	538
Stairways/corridors	5	54
Lobby	10	108
Restrooms	5	54
Warehouse	30	323
Storage	10–30	108–323
Maintenance	50	538

Source: Bill Conley. *Lighting Solutions*. Sustainability “How-To Guide” Series. Houston, Texas: IFMA Foundation, 2010.

A separate issue here is visual clutter or interference. Although it is not directly related to lighting, clutter can impair occupants' ability to concentrate and discriminate among images. A computer screen positioned against the background of a busy entrance or aisle will challenge workers' visual attention. Structural elements or seating arrangements that block necessary sight lines can also diminish productivity.



Inadequate lighting creates a host of problems for employers and facility managers:

- Excessively bright light creates psychological stress that often becomes physical illness.
- Glare on computer screens or directed into occupants' eyes from poorly placed lights or reflective surfaces or flicker in certain types of lights can cause headaches and eye strain.
- Insufficient lighting can slow work and cause higher error rates and accidents.

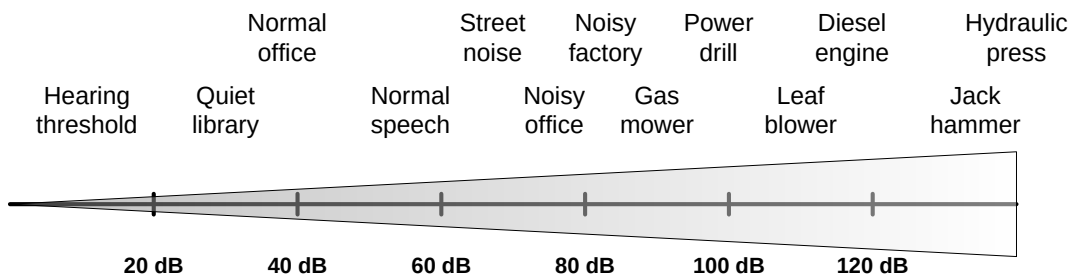
Did You Know?

A study conducted by the Commission for Architecture and the Built Environment attributes a 15 percent reduction in absenteeism and a three to 20 percent increase in productivity to good lighting design. Studies in schools have also shown the effect of natural lighting on students' test performance.

Noise

Noise can be considered unwanted sound that can harm health and impair productivity. Sound is measured in decibels. Exhibit 3-9 provides relative comparisons of sound levels.

Exhibit 3-9: Typical Noise Levels



Potential for hearing damage increases with decibel level and continuous exposure.

In many countries, acceptable noise levels in different types of workplaces are defined through regulation, such as the Control of Noise at Work Regulations (2005) in the U.K. Facility-generated noise may also be regulated as a form of environmental pollution. Again, FM must be aware of these legal requirements.



The negative effects of noise in the workplace include:

- **Loss of hearing.** Hearing loss may be temporary or permanent, sudden or gradual. It can result from exposure to a sudden loud noise or from prolonged exposure to an elevated level of noise. Loss of hearing affects workers' productivity, but it also damages their quality of life. Hearing damage can also take the form of tinnitus, or ringing or buzzing in the ears.
- **Increased vulnerability to safety hazards.** A loud background noise level can obscure warning sounds, such as alarms or forklift beeping.
- **Increased levels of distraction.** Like visual clutter, noise—such as that generated by vacuums and floor polishers or lawn mowers—can diminish productivity by distracting occupants from their work.

The effects of too much noise have been well studied, but with the increased use of open workplace designs and quieter ventilation systems and office equipment, facilities are becoming more aware of the effects of too little noise. Too little ambient noise can challenge speech privacy, as conversations can be easily overheard. A survey of over 65,000 office workers on four continents found that more than half were dissatisfied with the level of speech privacy that their workplaces provided. The lack of background noise can also increase distractions. A study by the Institute of Occupational Health in Finland found that overheard conversations could cause a five to 10 percent decline in the performance of cognitive tasks by unintended listeners.

Cleanliness

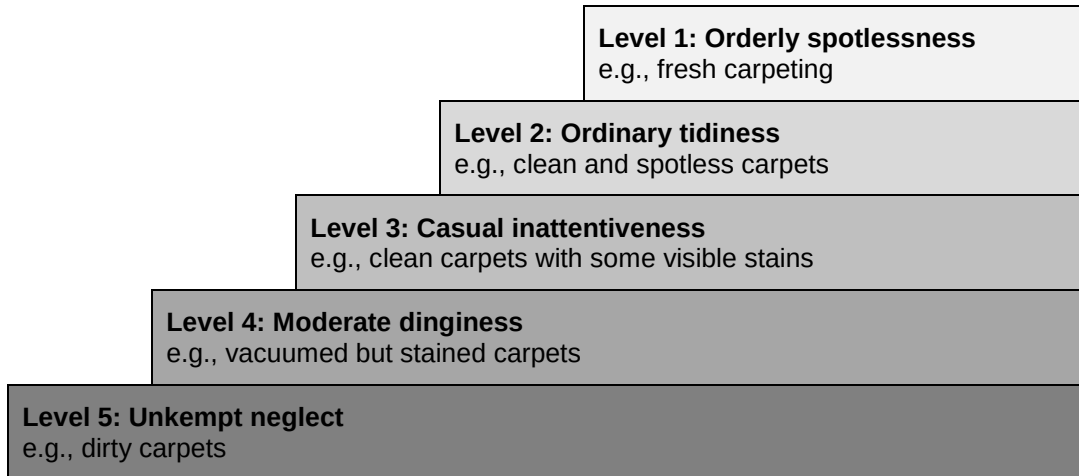
Cleanliness refers to the presence of dirt and dust and the maintenance of interior elements and furnishings. In some workplaces—such as hospitals, food preparation areas or data centers—cleanliness may be regulated by government and/or the organization itself. In other workplaces, a sense of cleanliness is highly contextual. The lobby of a Swiss bank may be kept spotless to impress clients, but the same level of cleanliness may not be required in the garage of a motor transport firm or in an agricultural products facility. FM should establish cleanliness standards in keeping with the organization's values, strategy and processes.

Although cleanliness expectations are subjective and contextual, APPA, an organization for educational facilities (originally known by its full name, Association of Physical Plant Administrators of Universities and Colleges) has created standards by which an organization can measure its cleanliness. These levels are shown in Exhibit 3-10. The guidelines are detailed, comparing certain facility elements at each level. The exhibit provides examples related to carpeting, but the guidelines also cover walls, lighting fixtures, restrooms and



trash collection. These guidelines can be useful in helping FM develop its own standards for self-assessment. They are also recognized by the U.S. Green Building Council and are used in the LEED building certification system.

Exhibit 3-10: APPA Levels of Cleanliness



The cleanliness of a facility is an economic issue for property owners, but for occupants it is a matter of health, productivity and motivation. Clean facilities have less dust and mold. Surfaces are disinfected more regularly. Orderly, well-maintained workspaces offer fewer visual distractions. Facility cleanliness also affects an occupant's need for esteem and fulfills aesthetic needs.

Cleanliness and good order are also directly related to facility safety. Boxes and clutter can impede safe exit during emergencies. Improper storage (e.g., storing boxes and furniture in electrical and mechanical rooms, storing flammable supplies near sources of ignition) can create a risk of fire and may violate fire safety codes. Ensuring a safe workplace is discussed in Chapter 3.

The goal of cleanliness must be achieved in a way that does not impair the facility's IAQ, however. Cleaning supplies and services should be evaluated in terms of their use of potentially irritating chemicals, such as bleaches or heavy, masking fragrances.

Strategies to support IEQ

Exhibit 3-11 lists some strategies facility managers may pursue to increase the physical comfort of occupants. The strategies must be aligned with the organization's goals and values. Some of the strategies listed may not be practical in all facilities (or cultures) or may apply only when a workplace is being renovated. Management should be aware of possible conflicts between goals, such as those between decreased energy use and occupant health.



Exhibit 3-11: Facility Management Strategies to Improve IEQ (continued on next page)

IEQ Component	Strategy/Tactics
Temperature and humidity	• Ensure performance of facility HVAC system and building automation system to deliver air at design-specified temperatures, humidity levels and air speeds. • Increase individual control: • In-floor air distribution systems with workstation controls • Operable windows (if feasible and safety issues do not exist) • Post heating/cooling temperature setpoints so occupants know what to expect. • Urge management to implement season-appropriate clothing policies. • Implement occupant satisfaction surveys.
IAQ	• Ensure optimal supply of fresh air: • Integrate carbon dioxide sensors and alarms into building systems. • Schedule overnight purges of facility air. • Inspect exhausts and maintain dampers. • Reduce sources of pollutants: • Install and maintain air filters in ventilation systems. • Eliminate possible sources of mold and mildew through inspections and maintenance. • Revise facility management policies on purchasing supplies and furnishings to eliminate VOCs and harmful chemicals. • Revise maintenance procedures (e.g., cleaning, pest control) to decrease occupant exposure to chemicals. • Separate ozone-producing equipment from occupant work areas if possible. • Encourage implementation of a facility policy to avoid hazardous materials and supplies. • Encourage facility policies to reduce odors and irritants: • Ban smoking inside the facility and outside entrances. • Implement policies on use of fragrances in certain areas. • Prohibit cooking that releases objectionable odors into work areas. • Require plans to reduce noise/air pollutants in all service/construction contracts. • Survey occupant satisfaction and monitor illness statistics.
Lighting	• Reduce glare: • Survey work areas to identify and correct sources of glare (e.g., highly reflective and poorly placed objects). • Add glare-reducing screens to monitors. • Use glare-reducing films or structures to reduce glare from outside light. • Add sensors to adjust indoor lighting to amount of outdoor light, reducing contrast. • Reduce flicker: • Replace lamps before they begin to fail. • Replace older light fixtures with fixtures equipped with electronic ballasts. • Provide appropriate lighting levels: • Establish recommended light level at desktop and measure levels. • Add task lighting at workstations to supplement ambient lighting. • Increase levels of natural light by redesigning space use or using reflective "light shelves" to direct light further into facility interior. • Survey occupant satisfaction with lighting and conduct periodic facility walking tours/inspections.



Exhibit 3-11: Facility Management Strategies to Improve IEQ (concluded)

IEQ Component	Strategy/Tactics
Noise	• Reduce unwanted noise: • Consider noise as a factor when purchasing equipment. • Conduct periodic inspections to identify noisy ductwork. • Separate occupant work areas from noisy operations when possible. • Revise facility procedures to conduct noisy activities (e.g., vacuuming, mowing outside) at hours when occupancy levels are low. • Install sound barriers around noisy internal or external equipment. • Encourage policies requiring occupants to set cell phones to vibrate or low-volume ringing. • Implement multiple cleaning shifts if necessary to minimize distraction to occupants. • Ensure privacy: • Install sound masking (i.e., “white noise”) systems. • In open floor plan workspaces, ensure access to areas that provide speech privacy. • Ensure that workers are provided and use hearing protection equipment.
Cleanliness	• Improve level of cleanliness: • Develop and use checklists to assess staff cleaning effectiveness. • Incorporate standards into service contracts with third-party cleaners. • Consider ease of cleaning when choosing furnishings and finishes. • Install hand dryers to eliminate accumulation of paper waste. • Clean refrigerators regularly. • Provide sanitizing wipes for hotelling occupants so that they can clean work surfaces and phones. • Assess custodial service level on an unscheduled (surprise) basis. • Include cleanliness in occupant satisfaction surveys; add occupant comment cards in restrooms. • Encourage implementation of facility cleanliness policy. • Implement green cleaning policy and contracting guidelines.

Facility managers should also consider that one of the best ways to increase occupants’ sense of control over their environments is to provide a regular means of communicating their desires and opinions—through periodic surveys or a facility Web site or social media page—and communicating to occupants how their feedback has affected facility management practices.

Topic 2: Occupant Wellness

Factors contributing to wellness

This topic shifts the focus away from external environmental influences on the human factor to internal factors that can affect occupant well-being and productivity and the ways that facility managers can support occupant wellness.



These internal factors include:

- Stress—an individual psychological response to work conditions that can harm physical health and occupant productivity.
- Ergonomics, or the musculoskeletal stresses individuals may develop as a result of their working conditions or habits.
- Health maintenance, or the way in which the workplace can support or discourage healthful practices.

Supporting a healthy workforce benefits organizations in many ways:

- Reduced stress
- Reduced illness and absenteeism
- Reduced incidence of workplace accidents
- Reduced costs of providing health-care insurance (Johnson & Johnson management has estimated that for every dollar spent on wellness programs, the company saves US\$2.71 on health-care costs.)
- Increased resilience of employees to illness and stress
- Increased employee engagement and productivity
- Improved employee morale and increased employee commitment/loyalty
- Better recruitment and retention rates
- Improved organizational image
- Compliance with national and local laws and regulations

Stress

As suggested in the previous topic, various environmental factors, such as excessive heat or cold or poor lighting, can cause physical and psychological stress. However, stress can also be created by a variety of workplace forces, including:

- **New technology**, which often reduces productivity during the implementation phase. Work backloads accumulate, causing longer hours at work and triggering manager and customer dissatisfaction.
- **Poor alignment of work expectations** with the time, skill and/or equipment required to perform the work. A common stressor is the management practice of increasing work quotas to meet business needs without considering what the tasks require of workers. Frequent and extended periods of required overtime are also problematic. Recently promoted employees who have not been adequately prepared for the change may become less motivated and engaged and grow demoralized.
- **A work environment marked by low employee trust and empowerment.** Poor supervisory practices—such as constant negative feedback, inconsistency in expectations and treatment or insufficient instruction—add to employee



stress. Lack of opportunity to contribute ideas or report concerns feeds a sense of powerlessness. Employees who have little information about the organization's goals, challenges and the reasons behind decisions feel more vulnerable.

- **Economic changes**, such as challenging budget environments or events that may lead to workforce reduction (e.g., mergers, buyouts).
- **Change**. As described in Chapter 1, even positive change requires cognitive and physiological adaptation. Frequent physical moves and repeated changes in leadership or direction raise levels of stress and may eventually result in employees becoming alienated from their organizations.

Stress can also be imported into the workplace—for example, from stressful commutes or from family or health issues.

Stress in moderation can be a good thing, since it is usually associated with challenges. Continuous or severe stress, however, can result in:

- Higher rates of illness and absenteeism.
- Declining quality and quantity of work.
- Behavioral issues (e.g., fighting, poor working relationships, disrespect for managers and co-workers, insubordination).
- Poor attitude and alienation from the workplace.

Ergonomics

Ergonomics is defined as the study of equipment design in order to reduce operator equipment fatigue and discomfort. An ergonomic workplace has been designed to meet employees' needs. Poor ergonomic design and poor work habits can result in musculoskeletal disorders (MSDs), which are injuries involving bones, muscles, joints and tendons.

Some MSDs develop over time from different causes, such as repetitive motions, lower back or leg strain from working/standing on concrete floors or poorly designed workstations or equipment (e.g., floor burnishers). Others occur suddenly, perhaps as the result of poor work practices (e.g., slipping or tripping, lifting heavy objects, lifting from an awkward or off-balance position).

Poor ergonomic conditions affect not only productivity but also the organization's premiums for workers' compensation insurance, which are based in part on the organization's record of claims.



Health maintenance

Work is increasingly sedentary in nature. This poses a challenge for maintaining a healthy workforce:

- Diabetes is associated with weight gain and lack of exercise and can lead to heart disease and early death.
- Lack of exercise leads to poor muscle tone and flexibility which, in turn lead to loss of balance and accidents. It is also a self-sustaining problem. Lack of exercise creates conditions that make exercising difficult.
- Eating habits have deteriorated, with more meals consumed away from home—often at the desk or in the car. These meals often include processed food with higher fat, sugar and salt content.

An additional challenge is the ease with which infections can be transmitted in workplaces with open designs, greater density, shared workstations and communal workspaces. A community flu epidemic can reach proportions in the workplace that make it necessary for organizations to invoke their business continuity plans. And there is always the specter of a global epidemic or pandemic that can have much more severe consequences.

Some may challenge the role of the employer in influencing employees' life-style choices. However, poor choices affect both the employee and the employer. Productivity declines when employees are struggling with health problems. Talent and organizational knowledge may be lost as employees have to stop working before usual retirement ages. For organizations providing health-care insurance, premiums increase to match the increased risk. In the end, it is the individual's choice, but the organization and facility can provide viable options and support for good choices.

Strategies to support occupant wellness

Because wellness strategies offer opportunities to improve employees' physical health and the organization's economic health, many organizations are trying to integrate wellness tactics into their facilities. Facility managers—perhaps in partnership with HR—must be prepared to discuss, propose and implement wellness programs that are appropriate for the organization, the facility and its occupants. In addition, in their supervisory role, facility managers must support the organization's wellness strategies with FM staff.

Exhibit 3-12 lists some strategies and tactics aimed at promoting occupant wellness.

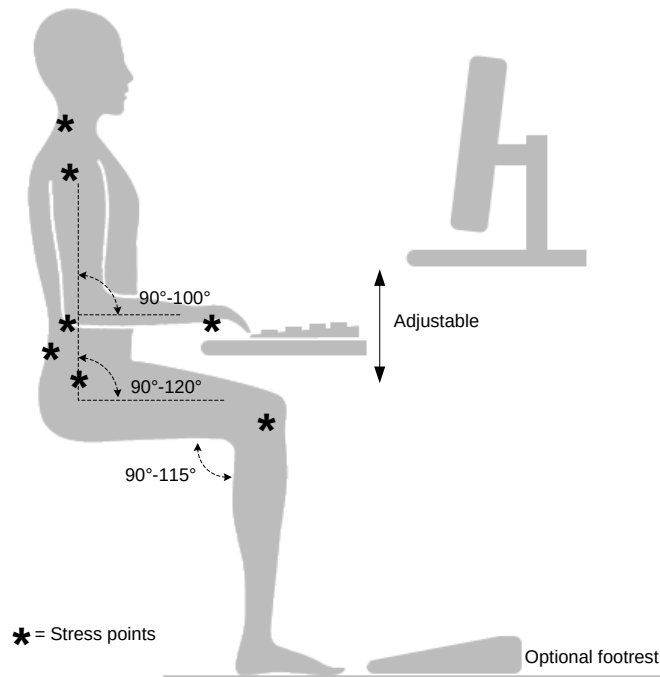


Exhibit 3-12: Facility Management Strategies to Improve Occupant Wellness

Wellness Component	Strategy/Tactics
Stress	• Identify and reduce sources of stress: • Conduct stress audits to establish stress levels and causes. • Ensure training of managers and supervisors to identify signs of stress and implement stress reduction or management tactics. • Support occupant stress management: • Provide training in stress management. • Provide sleep rooms for brief naps. • Implement policies that recognize stress and encourage employees to pursue treatment of stress-related conditions (e.g., counseling for chemical dependency, family problems). • Implement policies allowing alternative work schedules.
Ergonomics	• Reduce potential for injuries: • Modify processes to minimize repetitive motions. • Mitigate conditions (e.g., rubber mats at standing stations, wrist braces). • Promote awareness of ergonomic issues and provide training: • Alert occupants to contributing factors and warning signs. • Help new occupants customize alignment of chairs, surfaces and equipment. (See Exhibit 3-13, which follows this exhibit.) • Communicate and encourage positive work practices (e.g., periodic stretching, getting up from chairs and moving, “micro breaks”). • Evaluate workstations. Use ergonomic checklist to set up and reassess workstations. (See a checklist example at the Web site for the U.S. Occupational Safety and Health Administration, www.osha.gov.) • Select equipment based on ergonomic characteristics. Ensure that equipment can be used comfortably by all employees—regardless of size or gender.
Health maintenance	• Encourage healthy lifestyles: • Include recreation/exercise rooms in facilities. • Include facility amenities to support exercise (e.g., walking/running/biking paths, showers). • Include healthy eating options in facility food service areas. • Include exercise periods as part of compensated time. • Subsidize gym memberships. • Implement preventive measures: • Provide preventive health services (e.g., flu vaccination clinics, blood pressure and cholesterol testing). • Implement more rigorous sanitizing practices in shared and communal workspaces. • Promote hand washing and provide hand sanitizers. • Encourage management to implement policies that allow employees to stay home when they have communicable infections. • Encourage use of employee assistance programs.



Exhibit 3-13: Ergonomic Computer Workstation



Tips for ergonomic workstations:

- Monitor angled and positioned about 20 to 26 inches (50 to 66 cm) from eyes and at an angle of about 15 degrees.
- Seat at proper height to:
 - Align hands with keyboard without requiring an upward or downward flex at wrists.
 - Allow roughly 90-degree angle at hips and knees.
 - Allow feet to be placed on floor (or footrest).
- Sufficient lumbar support to maintain upright position comfortably (shoulders stacked over hips).
- No clutter at feet to prevent tripping. (However, if seat height cannot be adjusted, a footrest should be provided to maintain proper angle at hips.)

✦ Topic 3: Occupant Productivity and Creativity

One of the major contributions that FM can make to organizations' success is ensuring that the amount and type of facility space are aligned with the organization's strategic goals and culture and with specific department needs. It is the role of FM to balance efficiency (the facility's footprint), effectiveness (the way the facility supports what people do) and expression (the way people feel when they are at work).

This topic examines:

- Trends that are shaping the way facilities look today.
- The process facility managers use to ensure alignment of space programming with organizational strategy.
- Strategies for creating more productive and creative work environments.

Workplace and industry trends

The business strategy an organization pursues affects the amount, quality and use of its physical space. Some businesses may emphasize price leadership, built on the ability to ensure the most efficient production. Others may focus on reliable quality and service, which require effective processes and attention to employees' knowledge levels. Some may rely on always having the most innovative products or services, which will require an imaginative, highly knowledgeable workforce. No matter what an organization's strategic focus may be, however, no organization can neglect the need to use its resources prudently and to adapt to changing conditions in the environment.

Among the forces challenging today's organizations, three directly affect the way facility managers use space to support productivity and creativity:

- The trend toward smaller facilities
- The increasing size of the knowledge-based economy
- Changing demographics

Reducing the facility footprint

A common topic at facility management professional gatherings is how organizations can decrease their square footage while simultaneously growing the number of employees and increasing output. This trend is driven not only by the cost of space but also by the economic and environmental costs of operating that space. The bigger the space, the higher the organization's energy bills and the larger the organization's energy footprint.

Some shrinkage in facility footprints results from changes fueled by the economy and new technology:

- Just-in-time manufacturing approaches have been spurred by the need to keep costs low in a more globally competitive market. They have been enabled by advances in communication among supply chain members that allow suppliers to track or be notified automatically of low inventory status and by improved transportation. This trend means less facility space may be needed for warehousing and storage.
- Manufacturing lines have grown smaller in response to lean manufacturing processes that seek to eliminate waste—some of which can come from unnecessary time moving supplies, product and equipment around. Facility footprints become more compact and dense.



- Off-site data processing and storage through such means as cloud computing and more compact racking systems for servers have reduced the amount of facility space allocated for data purposes.
- New furnishings and office equipment, such as flat screens, can reduce the amount of office space needed.

Did You Know?

According to an IFMA benchmarking report, from 1991 to 2010 the average amount of space declined for every type of worker other than clerical workers:

- 15 percent reduction in executive management space
- 21 percent reduction in middle manager space
- 17 percent reduction in professional technical space

How does an organization accomplish a reduction in footprint? A variety of approaches have been used:

- Allocating space by actual work needs rather than by status (This means smaller senior management offices, with the regained footage often allocated to meeting areas.)
- Consolidation of amenities, such as multiple cafeterias in facility campuses
- Open floor plans that waste less space on walls and halls, using movable panels (cubicles) instead
- Smaller-scaled furniture and equipment
- Eliminating data equipment space by using cloud computing and storage
- Eliminating vast paper file areas in favor of electronic archiving (It is worth noting that converting existing paper files to electronic versions is time-consuming and expensive and still requires some storage. In addition, some documents, such as business continuity plans, require hard-copy backups.)
- Alternative work methods, such as telecommuting or part-time space sharing or hotelling (In the United States, telecommuting grew by 61 percent between 2005 and 2009. In an IFMA survey, more than half of responding facilities offered unassigned, reservable space to accommodate alternative work modes.)

Reducing facility size has its benefits and challenges, as seen in Exhibit 3-14.



Exhibit 3-14: Benefits and Challenges Associated with Reducing the Facility Footprint

Benefits	Issues
• Increased sustainability • Lowered real estate costs • Increased productivity and transfer of knowledge • Easier access to other occupants for work and socialization • Stronger morale because of more equal treatment • Increased retention of certain employees who value telecommuting	• Less privacy • Effects of increased density on comfort • Less meeting space • More noise and distractions • Less room for occupants' "stuff" • Compliance with government requirements for space per occupant • Resistance from labor or works councils/labor unions (See the Resource Center for more information about the nature of labor or works councils.) • Weakening of identity of telecommuters with organization

On the positive side:

- Environmental stewardship increases, as the organization's carbon footprint and site impact decrease.
- Productivity will increase as a result of lower costs, but it may also increase because occupants can work more efficiently and effectively. Organizations usually report increased output in open space designs—perhaps because of better adjacencies. Occupants have easier access to the people they need to work with. Transfer of organizational knowledge occurs more easily.
- Morale will improve when space is allocated according to need rather than status. Occupants will have the tools they need to accomplish their work. The organization puts its values into action.
- Employees who need flexibility in their lives will be attracted to the option of telecommuting.

There are issues, however:

- Occupants have less privacy in open floor plans.
- Increased density affects temperature and humidity, noise levels and air quality.
- Decreased office or workstation space means less opportunity for small meetings in these areas and creates greater need for meeting or conference space.
- If not implemented properly, an open space design can actually lower productivity by increasing the level of distraction.
- Space often comes at the cost of storage. Occupants may feel that they have no place to store personal items in their cubicles. Reducing storage space



for FM supplies may require changing work processes, finding new sources for supplies and possibly revising automated ordering systems.

- External stakeholders must be considered in reducing space allocations. There may be government regulations on minimum space per worker. Relations with labor or work councils can suffer if these bodies are not involved in the process.
- Telecommuters can feel less connected with the organization. They can also feel less supported by the organization if telecommuting is not implemented properly. Some research has shown that hotelling does not have high acceptance rates among employees. This is probably due to poor implementation. (The successful implementation of alternative work strategies is a complex challenge and is discussed in more detail below.)

As FM implements organizational strategies affecting the size and use of space in facilities, these challenges must be anticipated and managed. In the future, the workplace may be smaller, but it must be of even greater quality.

The knowledge economy

According to research gathered by IHS Global Insight, the output of knowledge and technology-intensive industries more than doubled from 1995 to 2010. In developing economies, output quadrupled. As society's needs change and new technologies emerge, work is becoming more about acquiring, using and sharing knowledge and less about performing the same physical tasks. The workplace has begun to evolve toward a new design that can support this type of work.

The “knowledge workplace” needs four different types of space:

- **Social space.** Social space supports building relationships and trust between workers and cohesiveness in teams. Social space is unassigned. It could include small cafes or beverage stations or lounges near lobbies or elevator areas.
- **Learning space.** This type of space accommodates individual and group learning. Training spaces must be equipped with technology that supports different types of learners, including hands-on learners. In an increasingly distributed workplace, these spaces also need technology to connect remote training participants.
- **Focused workspace.** The majority of a knowledge worker's time is spent independently—processing new information, organizing it and using it to



create solutions. This requires concentration and freedom from distractions. In an open workspace, quiet rooms with doors may be available to those who need to focus without distraction on analyzing information or designing solutions. Quiet rooms can also be used to isolate the sound of telephone conversations from other occupants and reduce its impact on productivity.

- **Collaborative space.** Individual work is only part of the organization's value. Value is increased when knowledgeable experts work together, sharing information and building on ideas to create stronger and more innovative solutions. This can be a noisy and chaotic process. It can also be a challenge in global organizations where team members may reside on different continents. Collaborative space could be booths located near work areas that could accommodate small team discussions or huddle rooms or project rooms in which team members can move from individual workstations to team work areas in a fluid manner.

The trend toward a knowledge environment is reflected in the previously mentioned IFMA survey. Almost all types of facilities reported increases in conference/training/team space—with options ranging from team space and huddle rooms to auditoriums. More than a third of the facilities responding to the survey reported a one-to-one ratio of conference seats to occupants.

Research has found a strong correlation between occupants' assessments of an organization's support of different work modes and that organization's performance—including performance against financial goals, market capitalization and rate of innovation. Top-performing organizations, as compared with organizations performing at an average level, were more likely to align facility space with the different types of workspace described above—socializing, learning, focusing and collaborating. These organizations also had higher rates of occupant satisfaction with the workplace, which often appears in occupant surveys as a reason to stay in or leave a job. In an America Society for Interior Design (ASID) survey, feelings about the physical workplace was the third-ranked factor in accepting or leaving jobs (at 21 percent), following compensation (62 percent) and benefits (22 percent). Occupants want a workplace that will help them be both productive and efficient.

The primary point here for FM is that facility managers must be aware that, for some types of organizations, the rules about how occupants and workspaces look and how occupants use their workspaces have changed. Knowledge



workers may spontaneously use a room's windows as whiteboard, and it will be counterproductive to get them to change their habits or erase their work each night to meet a facility standard that doesn't match the organization's needs or culture. FM must strive to understand their organizations' workplace needs and fulfill them, even if it means exchanging traditional notions of facility management for unconventional approaches.

Did You Know?

The Googleplex, Google's global headquarters in Mountain View, California, has incorporated many aspects of the knowledge workspace. Whimsical furnishing touches, such as lava lamps and beanbag chairs, encourage creativity. Stress-relieving opportunities, such as pool tables and pianos, are interspersed throughout the facility. Occupants can use huddle rooms for small team meetings. They can decorate their own workspaces and nearby huddle rooms.

Demographic changes

Facilities will constantly be challenged by the changing characteristics and expectations of demographic groups passing through the workplace. For example, today's facility is challenged to meet the needs of the Millennial generation, those born between 1981 and 2000. This group is more social than previous generations. It has a preference for social networking and collaboration. This generation will be attracted by the greater opportunities for socialization that open designs allow. Their work habits will require more team space and unassigned space that can be used flexibly.

At the other end of the demographic range, aging workers may welcome alternative work strategies, which can help them avoid tiring commutes. However, in giving up assigned space, they may want to be assured of access to quality facility space when they need it.

Facility management strategies

Facility management can support more productive use of workspace by ensuring that occupants have the right quantity of space for their needs and the right quality of space. This means that facility managers must:

- Provide an effective workplace that supports the different types of productive activities in the organization.
- Re-equip space to support internal mobility, increase the flexibility of workspace and reduce wasted space.
- Support distributed work strategies that decrease space needs while supporting occupants' productivity, creativity and work/life balance.



**Design for
workplace
effectiveness.**

As mentioned earlier, an efficient space allows occupants to perform the activities required for the organization to meet its strategic business goals. It is not measured by a space utilization index but by business outcomes, such as customer satisfaction rates, new patent applications, time to market or ability to meet schedules, budgets and quality levels. To be efficient, a workspace needs to support different types of activities, facilitate collaboration and satisfy occupants' aesthetic needs.

Accommodating different purposes for space

In "Space, Conversations and Place: Lessons and Questions from Organisational Development," Colin Beard and Ilfryn Price note that a functional workplace needs different types of workspaces:

- **Individual and group reflective places.** These places are not meant for formal meetings but for quiet, private discussions or solitary concentration or contemplation. These environments are constructed to protect occupants from intrusion and distractions. They may be very small but comfortable rooms, or they may not be rooms at all but walking paths or benches overlooking a pond on the facility grounds.
- **Team or networking spaces.** These spaces encourage unconventional thought by being unconventional themselves. They may be organized unconventionally. Beard and Price describe a team space at a beverage company that was designed more as a café than a meeting room, with individual tables and multiple centers of attention. Spaces may also use unconventional colors or empty space that allows modeling of concepts being discussed.

Too often, workplace design is simply too standardized. For example, everyone (other than management) is given the same size cubicle, without regard to how they use space. Some occupants may need enough space to have frequent one-on-one meetings with team members, while others may interact with others only virtually, by phone or e-mail. Some occupants need storage space or table space, while others need just a computer workstation. And yet everyone has the same 90 square feet of space. Similarly, most occupants do not require distraction free space for the entire day. Their needs can be met by ensuring access to distraction-free areas when they need it.

Meeting space design can also be flexible. Efficient workplaces have meeting rooms of different sizes. Large meeting or training rooms can be subdivided into smaller spaces with sliding doors or partitions.



Facilitating collaboration

Facility managers can support collaboration and creativity by:

- **Creating and supporting flexible, well-equipped team spaces.** The Jet Propulsion Laboratory, part of the U.S. National Air and Space Administration, implemented “XC” or “extreme collaboration” space for teams working on design proposals. The rooms are equipped with technology that allows physical and virtual participation. Besides space for group meetings, the room has individual workstations so that team members can move back and forth between individual focus work and team discussions. HD teleconferencing and computer technology allow sharing of data and images. Teams can access the room for sessions lasting several hours. Design proposal time was decreased from as long as nine months to as little as three days.
- **Ensuring that frequently collaborating groups can access each other easily.** Adjacency of collaborating groups makes it possible for occupants to ask questions, share ideas and receive decisions as the need arises. This shortens project or task time. Collaborating groups or functions should be at least in the same building and ideally on the same floor. If adjacency is impractical, facility managers should be mindful of how easy or hard it is for occupants to get from one area to another. Complex, confusing corridors make trips longer and discourage face-to-face interaction.

Satisfying occupants’ aesthetic needs

Chapter 1 discussed the aesthetic appeal of the workplace as satisfying occupants’ needs for esteem. An attractive, well-maintained workplace creates a sense of pride and well-being, which, in turn, supports productivity. Facility aesthetics can be an integral part of a corporate design but can also include:

- **Cleanliness** (e.g., no scuff marks on baseboards or fingerprints on walls or glass surfaces). In the ASID survey mentioned earlier, two out of five occupants noted cleanliness as the important workplace characteristic.
- **Well-maintained interiors** (e.g., regularly repainted walls, dusted lighting fixtures).
- **Views.** Views provide both physical relief and a cognitive rest. They may be required by law, depending on jurisdiction. Eye strain can be reduced if occupants change their visual focal point at intervals—looking up from



computer displays or desktops to more distant images. Ideally (and possibly legally under some workplace regulations) all occupants have some access to windows and outdoor views. However, views can be interior as well—atriums, glass-walled hallways. Visual interest can be created even in small areas by using different colors and textures. FM should be aware of whether views are accessible to a majority of occupants or only a few.

- **Lighting.** Light sources, including natural light, can be directed and combined with architectural and design elements to create visual interest and provide brief respite from visual tasks.
- **Art.** Art in the workplace provides at least a visual distraction, but, if chosen well, it can also stimulate thought and imagination. Art programs can connect the workplace to the community and to the organization's values. A quality art program can enhance the esteem of both the facility and its occupants. Deutsche Bank is famous for an art collection that mirrors its global orientation. Bank of America plays an important role in art conservation in the regions it serves and shares art with local museums and galleries.

Design for workplace efficiency.

Workplace efficiency can be seen as something that primarily benefits an organization's financial stakeholders. Decreasing footprint and the facility's churn rate (the amount of movement and relocation of occupants within an organization within a specified period) will reduce an organization's operating costs. However, designing for efficiency also affects the humans in the workplace and can reduce their comfort and productivity if changes are not implemented properly. When the facility footprint is decreased, it is essential to mitigate the effects of the facility change on occupants.

The right type of furniture can lessen the effect of decreased office size. Facility managers can make a sound business case for investing in new, modular, freestanding furniture. Pieces can fit together without space-wasting gaps, and smaller surfaces can easily accommodate newer computer equipment. Office or cubicle size can be decreased and still leave some room for casual meetings or storing personal items.

Newer furnishings also support less disruptive moves. For economic reasons, facilities have focused on decreasing their churn rates. A move involving furniture costs on average US\$689. However, occupants bear costs as well, in



the form of lost productivity. Facility managers have found that newer, standardized furniture simplifies moves because people can be moved without moving furniture. FM can adjust the existing furniture to meet the new occupant's work and ergonomic needs.

Facility managers can employ other strategies as well to minimize the impact of a move on occupants, such as:

- Ensuring that all storage furniture is on wheels so that it can be quickly moved into its new location.
- Ensuring that occupants can secure expensive or sensitive equipment in a locked space.
- Providing occupants with tools they need for their moves (e.g., preprinted labels, dollies, recycling bins).
- Providing a “plug and play” facility, in which occupants can simply plug their data and communications equipment into existing connections, without having to wait for rewiring and cabling.
- “One number” phone systems that follow occupants to their new locations.
- Swing spaces to accommodate displaced occupants during extended relocations.

Support alternative work strategies.

For some organizations and some types of work, distributed (or alternative) work strategies can be an effective way to accommodate a growing workforce and/or shrinking facility. After all, “work is what you do, not where you go.” IFMA’s “Distributed Work” Research Report #31 defines distributed work as “work that is spread among teams in variable locations that occurs at varying times.” The report describes the use of both on-site and off-site distributed workspace:

- On-site distributed workspace refers to:
 - Common activity areas, such as huddle rooms or team spaces.
 - Individual work areas that are not assigned to specific occupants but are available for occasional and short-term use, such as free address or touchdown spaces.
 - Shared space, where two or more occupants share one assigned workstation.
 - Satellite offices that are owned or leased by the organization and provide workspace and support services.
 - Alternate workspace used for business continuity purposes (to ensure the continuation of critical processes during and after emergencies).
- Off-site distributed space refers to remote working arrangements.



Both types of distributed workspace strategies are widely used. In the 2009 IFMA survey, more than 60 percent of all responding facilities reported using on-site distributed workspace, while 56 percent offered off-site options to employees. Although the use of alternative workplace strategies is not a decision for which FM is solely responsible, FM should be aware of the advantages that drive the adoption of these strategies and the associated issues that FM may be involved in managing, such as hotelling reservation systems and ensuring home workplace ergonomics.

Telework/telecommuting

Telework or telecommuting—the terms are essentially synonymous—is becoming an increasingly popular space management strategy for organizations.

In the U.S., telecommuting grew by 61 percent between 2005 and 2009, and it has been estimated that almost half of the workforce could be telecommuting at least part-time—saving facilities space and operating costs, saving the environment by trimming carbon outputs from commuting and saving the occupant time that could be spent more productively and with less stress. Similar trends have been seen in Europe as well, where the percentage of workers telecommuting at least a quarter of the time ranged from 15 percent in the Czech Republic to 8 percent in the U.K. to a low of 1.6 percent in Bulgaria.

Both on-site and off-site distributed workspaces offer certain challenges. Examples are listed in Exhibit 3-15.

Exhibit 3-15: Challenges of Alternative Workspace Strategies

On-Site Challenges	Off-Site Challenges
• Managing space availability • Wasted space • Lack of privacy • Occupants' resistance to change • Ergonomic issues • Orienting visitors to locations of amenities, services and egress routes • New technology • Storage options for occupants' material and belongings • Increased stress on facility management staff	• Management resistance to change • Ability to track productivity • Organizational culture • Technology constraints • Need for employees to be self-motivated • Ensuring ergonomic and distraction-free workspace • Occupants' resistance to change • Cost • Security of proprietary information • Health and safety of telecommuters • Compliance and union contract issues

Source: "Distributed Work," IFMA Research Report #31. Houston, Texas: International Facility Management Association, 2009.



Probably the most common obstacle associated with on-site distributed workspace is managing its availability. Automated, self-serve systems facilitate this process but require initial investment and ongoing maintenance and support. The most common obstacle associated with off-site workplaces is resistance from both managers/supervisors and occupants. Managers are often concerned about losing control over telecommuting employees, and in organizations where trust levels are low, telecommuting employees are suspected of not working as hard or as long as employees on site. On their side, employees fear losing services and resources that support their productivity. They may also fear that opportunities for promotion or training will go first to those who work on site.

Facilities that have been successful with initiatives such as telecommuting and unassigned space have approached them as strategies rather than quick solutions. A process for selecting, implementing and supporting the move outside the facility walls must be developed, and support from both management and occupants must be ensured. Implementation strategies include:

- Communication about the strategy and its benefits to both management and occupants.
- Offering incentives for participating occupants and targeting groups to whom working off-site is more feasible and attractive.
- Implementing policies that define the teleworking relationship. One tactic here is a formal agreement between the occupant and the employer that defines issues such as job expectations, communication requirements, work hours and availability, required training and reinforcement of compliance with all organizational policies and procedures.
- Implementing technology to support communication, such as virtual private networks, document-sharing Web sites and Web conferencing.
- Implementing processes to ensure that those who give up dedicated space still have access to everything they need to be productive. This may involve using focus groups, job observations or questionnaires to gather information before introducing the new telework policy.
- Developing checklists to ensure health, safety and security in home offices.



Progress Check Questions

Directions: Read each question and respond in the space provided. Answers and page references follow the questions.

1. Which of the following statements about the effects of an unsatisfactory work environment is true?

(Choose one.)

- ☐ a. A poor work environment may have indirect psychological effects, but direct economic effects are difficult to identify or measure.
- ☐ b. The negative results of poor workplace quality can range from depression, stress and anxiety to musculoskeletal disorders and lost-productivity costs.
- ☐ c. The key negative impact of a poorly designed work environment is disproportionately high legal liability costs.
- ☐ d. Illnesses resulting from poor workplace environments are by and large physiological, primarily musculoskeletal disorders.

2. List four components of indoor environmental quality (IEQ).

3. The sensation of temperature is affected by factors other than the air temperature itself. These factors include which of the following? (Choose all that apply.)

- ☐ a. Amount of air movement
- ☐ b. Steadiness of temperature
- ☐ c. Height-to-width ratio of indoor air space
- ☐ d. Ability to control temperature

For questions 4 through 8, match the sources of facility air pollutants on the left with the resulting negative impact on indoor air quality (IAQ) on the right.

Pollutant source	Negative IAQ impact
_____ 4. Nearby heavily traveled highway	a. Emit carbon monoxide.
_____ 5. Propane-fueled facility maintenance equipment	b. Increase bacteria and viruses, carbon dioxide.
_____ 6. Poorly maintained HVAC equipment	c. Emit ozone gas.
_____ 7. Paints, glues and coatings on furnishings	d. Emit volatile organic compounds (VOCs).
_____ 8. Occupants	e. Promote mold.



9. Adequate lighting, which has been shown to improve productivity, involves which of the following?
(Choose all that apply.)

- ☐ a. Avoids glare
☐ b. Incorporates natural light as much as possible
☐ c. Is appropriate to both the task and the surroundings
☐ d. Meets current energy-efficiency standards

10. A company is in the process of renovating its headquarters, which houses both its administrative/sales offices and its fulfillment (packing and shipping) warehouse. List one renovation strategy that facility managers should consider to improve **each** of the following IEQ components.

IEQ Component	Strategy
IAQ	
Noise	
Lighting	
Thermal comfort	

11. Supporting a healthy workforce benefits organizations in which of the following ways? (Choose all that apply.)

- ☐ a. Reduced absenteeism
☐ b. Reduced facility maintenance costs
☐ c. Reduced costs of providing health-care insurance
☐ d. Increased productivity while at work

12. Which of the following statements about stress in the workplace is accurate? (Choose one.)

- ☐ a. Increasing overtime inevitably leads to increased workplace stress.
☐ b. Even moderate levels of workplace stress have been shown to increase illness and absenteeism rates and create behavioral issues.
☐ c. Supervisors who provide constant negative feedback or insufficient instruction can add to employee stress.
☐ d. Increasing work quotas to meet business needs may create moderate levels of stress but can provide a positive challenge.



13. Which of the following defines ergonomics? (Choose one.)

- ☐ a. The study of equipment design in order to reduce operator equipment fatigue and discomfort
- ☐ b. The science of diagnosing and treating musculoskeletal disorders
- ☐ c. An approach to workplace design that attempts to balance economic and physiological costs and benefits
- ☐ d. A system for evaluating the economic impact of musculoskeletal disorders on the workforce

14. Which of the following is a key reason for the faster spread of infections in the modern workplace? (Choose one.)

- ☐ a. The increasingly sedentary nature of work
- ☐ b. More open designs and greater density in workplaces
- ☐ c. A greater reliance on day-care facilities for the children of two-income families
- ☐ d. Deteriorating eating habits among workers

15. List three facility management strategies to improve occupant wellness that do **not** require purchasing equipment or reconfiguring the facility.

16. Your organization must downsize its facility's footprint and is trying to decide between two main strategies: adopt an open floor plan or encourage some employees to telecommute. You feel that an open floor plan is the better strategy. Provide three reasons why—either arguments **for** an open plan or **against** telecommuting.



17. To better meet its needs as a “knowledge workplace,” a facility has been reconfigured to provide more conference/training space. This will better enable which of the following modes of work?

(Choose all that apply.)

- ☐ a. Socialization
☐ b. Learning
☐ c. Focus
☐ d. Collaboration

18. An organization is considering an investment in new modular, flexible, freestanding furniture that is attractive, light, technology-friendly and easy to move and reconfigure. To justify the expense, they want assurance that it meets several different goals. List at least one way in which the purchase can support each of the following workplace strategies.

The new furniture could improve workplace **effectiveness** by: _____

The new furniture could improve **efficiency** by: _____

The new furniture could enable **distributed work strategies** by: _____



Progress check answers

1. b. A U.K. report estimated that during 2001 to 2002 about 33 million workdays were lost due to illness caused by work or by the workplace itself. The illnesses were almost evenly split between psychological issues (e.g., depression, stress, anxiety) and physiological issues (primarily musculoskeletal disorders). The estimated costs for this lost productivity were £4 billion. (p. 3-22)
2. The correct answer would include any four of the following components of indoor environmental quality (IEQ):
 - Temperature and relative humidity
 - Indoor air quality (IAQ)
 - Lighting
 - Noise
 - Cleanliness (p. 3-23)
3. a, b, d. The sensation of temperature is affected by factors besides air temperature; these include air movement, relative humidity, swings in temperature and individual occupant control of thermal comfort. (p. 3-25)
4. c. Heavy automobile use causes high levels of ozone gas, which is an irritant. (p. 3-27)
5. a. Some propane-fueled facility maintenance equipment can emit carbon monoxide, which can be toxic at certain levels and can affect mental acuity. (p. 3-26)
6. e. Drips or wet areas caused by faulty or poorly maintained HVAC equipment can promote the growth of mold. (p. 3-26)
7. d. Paints, glues and coatings on facility furnishings can emit volatile organic compounds (VOCs), which can irritate mucous membranes, impair memory and cognitive processes and cause headaches and even liver damage. (p. 3-26)
8. b. Occupants add to the load of odors, bacteria and viruses in the air. They also increase the area's relative humidity and carbon dioxide levels. (p. 3-27)
9. a, b, c. Adequate lighting means that:
 - Lighting levels are appropriate to task and surroundings.
 - Lighting is sourced in such a way as to avoid glare, any excessively bright source of light within the visual field that creates discomfort or loss in visibility.
 - Lighting design incorporates natural light (without introducing glare) as much as possible. (p. 3-28)
10. Any of the following are appropriate renovation strategies to improve specific components of IEQ.
IAQ:
 - Integrate carbon dioxide sensors into building systems.
 - Separate ozone-producing equipment from occupant work areas where possible.
 - Revise facility management policies on purchasing supplies and furnishings to eliminate VOCs and harmful chemicals.Noise:
 - Consider noise as a factor when purchasing equipment.
 - Separate occupant work areas from noisy operation when possible.
 - Install sound masking (i.e., "white noise") systems.



Lighting:

- Survey work areas to identify and correct sources of glare (e.g., highly reflective and poorly placed objects).
- Add glare-reducing screens to monitors.
- Add task lighting at workstations to supplement ambient lighting.

Thermal comfort:

- Add in-floor air distribution systems with workstation controls.
- Add operable windows. (p. 3-32)

11. a, c, d. Supporting a healthy workforce benefits organizations in many ways:

- Reduced absenteeism
- Reduced costs of providing health-care insurance
- Increased resilience of employees to illness and stress
- Increased productivity while at work (p. 3-34)

12. c. Poor supervisory practices—such as constant negative feedback, inconsistency in expectations and treatment or insufficient instruction—add to employee stress. (p. 3-34)

13. a. Ergonomics is defined as the study of equipment design in order to reduce operator equipment fatigue and discomfort. (p. 3-35)

14. b. An additional challenge for maintaining a healthy workforce is the ease with which infections can be transmitted in workplaces with open designs and greater density. (p. 3-36)

15. Strategies that improve occupant wellness but don't require new equipment or facility modifications include any of the following.

Stress reduction measures:

- Conduct stress audits to establish stress levels and causes.
- Provide training in stress management.
- Encourage employees to pursue treatment of stress-related conditions.
- Implement policies allowing alternative work schedules.

Ergonomic training initiatives:

- Alert occupants to contributing factors and warning signs.
- Train occupants to adjust chairs, surfaces and equipment. (See Exhibit 3-13.)
- Communicate and encourage positive work practices (e.g., periodic stretching, getting up from chairs and moving, “micro breaks”).

Health maintenance preventive measures:

- Provide preventive health services (e.g., flu vaccination clinics, blood pressure and cholesterol testing).
- Promote hand washing.
- Encourage management to implement policies that allow employees to stay home when they have communicable infections. (p. 3-37)



16. Any of the following arguments **for** an open plan:

- Organizations usually report increased output in open space designs.
- Occupants will have easier access to the people they need to work with.
- Younger occupants will be attracted by the greater opportunities for socialization that open designs allow.

Or any of the following arguments **against** telecommuting:

- Telecommuters can feel less connected with the organization.
- They can also feel less supported by the organization if telecommuting is not implemented properly. (p. 3-44)

17. a, b, d. Socialization, learning and collaboration are all group-oriented activities that would benefit from more communal spaces. Focus, however, involves independent work requiring concentration and freedom from distractions. (p. 3-42)

18. Any of the following arguments can be made:

Improve workplace effectiveness:

- Accommodating different purposes: modular, tech-friendly and easily moveable furniture can be reconfigured to create both flexible, well-equipped team spaces and individual focus areas.
- Satisfying occupants' aesthetic needs through new, attractive furniture.

Improve workplace efficiency:

- Lessening the effect of decreased office size with designs that eliminate gaps and align surface size with the needs of new computers.
- Supporting less disruptive moves with standard, easily configured designs.

Support distributed workspace strategies:

- Allowing for easy reconfiguration to accommodate changes in workforce size and in changing functional needs—e.g., switching easily from group meeting space to a set of individual workstations. (p. 3-44)



Chapter 3: Creating a Safe and Secure Workplace

After completing this chapter, students will be able to:

- Describe the benefits of maintaining effective facility safety and security practices.
 - List the steps a facility manager should follow in creating safe and secure facilities.
 - Provide a variety of examples of tactics facility managers could implement to support facility safety.
 - Describe the possible role of safety committees in facilities.
 - List tactics to follow in managing contractor relations and projects to improve facility safety.
 - Characterize the range of security threats organizations and facilities may face.
 - Provide a variety of examples of tactics facility managers could implement to support facility security.
-

A facility manager has an ethical obligation to protect occupants from workplace accidents, violence and theft. However, ensuring workplace safety and security is also a business imperative. The International Labour Organisation (ILO) estimates that four percent of the world's gross domestic product is lost annually as a result of workplace accidents and work-related diseases. A survey conducted by an American insurer found that a majority of business leaders believed that an investment in injury prevention doubled its value through increased productivity.

Deliberate acts of violence and terrorism also cost organizations and entire countries. Of seven million U.S businesses surveyed by the Bureau of Labor Statistics in 2005, an average of one in every 20 reported that an incident of workplace violence had occurred in the previous year causing lost productivity and potential liability costs as well. In 2010, the U.S. experienced 518 workplace homicides. The terrorist attacks in Mumbai in 2008 have been estimated to cost India nearly 40 billion rupees (more than US\$715 million) in damage and lost productivity.

In addition to protecting productivity rates, organizations conscious of safety and security also enjoy a stronger and more positive image. They are seen as well-managed operations by investors and good places to work by prospective employees. This image can also secure more advantageous underwriting rates from insurers.



Finally, another factor driving facility action in this area is compliance with federal and local laws and regulations. Noncompliance can mean substantial fines and possibly cessation of certain operations and the closure of all or part of a facility. Facility managers must work closely with their organizations' compliance officers and learn more about the organization's legal obligations to correct shortcomings quickly and prevent future noncompliance.

As this chapter discusses, facility managers cannot fulfill the responsibility to provide a safe and secure facility alone. The entire organization must be engaged. Facility managers must make safety and security part of the organization's culture in order to achieve any measure of success in specific initiatives.

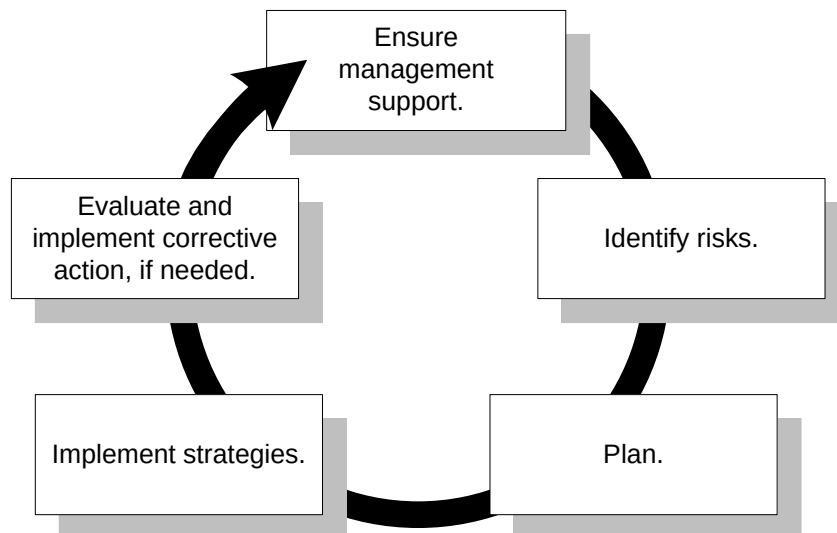
Learners interested in reading more about facility safety and security from an operational perspective should see the *Operations and Maintenance* competency.

✦ Topic 1: Creating a Facility Culture of Safety and Security

Creating a safe and secure workplace must be an integrated process because it aims at changing behavior that is probably deeply ingrained and may be motivated by complex factors. Routinely published messages and posters will not be enough.

Exhibit 3-16 describes a process that can be applied to creating safe and secure facility cultures.

Exhibit 3-16: Creating a Facility Culture of Safety and Security



The word “culture” is meaningful. Cultures are based on shared values and norms that guide perception and choices. Culture abides. It is not a yearlong campaign or a short-term reaction to a specific event. Safety and security must become permanent issues in a facility manager’s work life, so that whenever the facility manager considers a new process, project or piece of equipment, possible impact on safety and security is added to the list of factors to be evaluated, alongside budgets and schedules.

The process of creating a culture of safety and security begins with enlisting support from the organization’s leaders and gaining greater awareness of the range of risks to occupant safety and security that a facility is likely to confront. Then, facility managers can set goals and develop appropriate strategies and involve management and occupants actively in their implementation. Finally, the facility manager must measure the effectiveness of these strategies, reinforcing or revising them as needed. This chapter applies this process to each of the chapter topics, facility and occupant safety and security.

✦ Topic 2: Strategies to Increase Facility Safety

Ensure management support.

Management support is essential to any initiative aimed at shaping the organization’s culture. Beyond the fact that safety initiatives will probably need resources to support change, the importance of attention to safety must be established in communications from leaders—in annual meetings, letters, annual reports—and in actions. Management has an opportunity and obligation to model desired behaviors. Safety policies must be adopted. Responsibility for ensuring occupant safety must be included in job descriptions and considered during performance reviews. Actions that exemplify desired safe behavior should be rewarded in a public manner. Leaders, including facility managers, must also demonstrate a serious and professional attitude toward safety issues. When safety requirements are treated as a nuisance or joke by supervisors and managers, they will have little impact on occupant behavior.

One of the most critical aspects of leadership support for safety is that occupants should never be forced to choose between safety and their jobs. Unrealistic deadlines can cause employees to drive home exhausted and fall asleep at the wheel. They can cause technicians to break safety rules to save time. Supervisors can be penalized for having too many accidents in their units when they faithfully report accidents. As a result, there is perceived pressure to underreport or not report problems, and problems are not corrected.



Identify risks.

The *Emergency Preparedness and Business Continuity* competency discusses the process of risk management, the first step of which is to identify risks of various sorts that could damage the facility and harm the organization's business. Facility managers work with cross-functional teams to identify internal and external risks from nature, humans and technology. Some of the same techniques can be used to identify safety risks, such as interviewing managers and supervisors, conducting focus groups with work groups and delivering surveys.

In addition, FM should consider:

- Working with human resources to analyze accident reports and claims for workers' compensation to identify patterns of problems and key sources of risk.
- Collaborating with the organization's safety officers or department to develop effective responses to safety risks.
- Arranging for an insurer to conduct a workplace safety needs assessment. Insurers may also be able to provide online tools to assess risk.
- Conducting safety walk-through tours of the facility.
- Observing occupants and facility technicians at work.
- Compiling a list of all hazardous materials used in the facility and their storage locations.

Plan a facility safety strategy.

When planning facility strategies to ensure and promote safety, facility managers should include representatives of those who will be directly affected by the proposed programs. They can help make programs more "real world," assist in identifying requirements to implement these ideas and gain credibility for the programs with their intended audiences.

The facility's safety strategy should approach the topic from a variety of tactical directions:

- Policies and work rules are used to communicate expectations to occupants and staff. To be effective, they must be supported through consistent and continuous management action.
- Prevention aims at removing or avoiding causes of accidents (e.g., equipment, education, elimination of hazardous materials).
- Mitigation accepts the fact that some accidents will happen but the severity of their impact can be reduced through preparation.

Examples of these tactics are listed in Exhibit 3-17.



Exhibit 3-17: Examples of Safety-Oriented Tactics

Policies and work rules	• Including safety priorities in descriptions of roles and responsibilities and using these expectations to assess performance • Creation of safety committees and processes for investigating issues and recommending solutions • Commitment to funding training and equipment and making them available to employees • Disciplinary procedure for negligent or noncompliant behaviors • Protection from management or co-worker retaliation for those reporting unsafe conditions or practices • Enforcing employee photo ID and visitor badge policies (Badges should specify whether the visitor can be unescorted or must be escorted at all times.) • Requirements for the use of personal protective equipment (PPE), such as breathing masks or protective eyewear • Safe work method statements (descriptions of how to perform a specific process or operate a piece of equipment) • Requiring managers and supervisors to report “near misses” so that potential problems can be identified and corrected • Work dress rules prohibiting clothing or jewelry that could become entangled in equipment • Cautions that must be taken when using certain equipment or hazardous materials • Documentation of accidents, safety audits and completion of training (e.g., accident logs, site inspection checklists) • Reporting to outside agencies to comply with laws and regulations • Compliance with inspections by outside agencies
Prevention	• Assessment of risks and hazards (e.g., job hazard analysis or job safety analysis) • Training, e.g., how to lift heavy objects, how to turn off electricity, steam or fuel before repair and maintenance jobs (“Toolbox talks” bring brief training events on specific topics to the workplace floor. Free meeting agendas and materials can be downloaded from different sites.) • Regular inspection of safety devices on operating equipment • Replace of dangerous equipment • Substitution of nontoxic materials for hazardous materials where possible • Barricades and signage in multiple languages, if necessary (e.g., to mark slippery floors or risk from falling objects or electrical lines) • Appropriate lighting levels
Mitigation	• Organization and training of an incident management team, including team and occupant exercises (e.g., facility evacuations under different conditions) • Root cause analysis and corrective action following incidents • First aid supplies and training • Eye-washing stations and safety showers • On-site information about materials used (e.g., material safety data sheets and binders) • Training about accident response • Signage with quick, clear instructions



The safety strategy should also include plans for auditing compliance with policies and work rules, including required intervals for audits and tools used to assess compliance. In addition, the strategy should identify appropriate measures that can be used to evaluate the strategy's effectiveness after a defined period of time. Measures should reflect the organization's unique risks and concerns and should be quantifiable, such as a decrease in workers' compensation claims or a certain level of compliance scores on audits.

Implement the strategy.

Effective implementation of safety programs depends on the quality of communication and the degree to which occupants and staff are engaged in the organization's safety goals.

Like other major organizational strategies, a new safety strategy merits a full communication campaign. The campaign can address issues such as:

- The best timing and vehicle for introducing the program. Can the safety initiative be combined with an annual or quarterly meeting? Will a special edition of a tenant newsletter actually be read? Would a series of short newsletter/Web site articles or e-mails be more effective than a full launch?
- Management support. Would video messages from senior management be effective with this audience? Could senior managers attend group meetings to endorse the program?
- Receiving feedback from occupants and staff. How can a feedback channel ensure anonymity to those reporting safety infractions?
- Avoiding message fatigue. At what point will occupants and staff cease to hear the message? How can the message be modified? For example, regular safety messages in facility newsletters could be kept fresh by alternating safety "stories" with statistics, tips and new information.

Safety committees

The safety process is institutionalized through the creation of safety (or health and safety) committees. The safety committee is usually composed of representatives from both management and workers. They may be created within departments or may be cross-functional. (In the U.S., these committees may play a statutory role under state and municipal law. They are referred to as joint loss management committees, and they are required to review incidents and workers' compensation claims for the purpose of making workplace conditions safer.)

Safety committees can support safety programs in a number of ways. They can:

- Assess workplace risks and conduct workplace inspections/tours.
- Review new equipment, processes or projects for potential safety implications.



- Develop or review and endorse safety policies and work rules. This can include integrating new safety policies into construction and maintenance procedures.
- Implement training and review its effectiveness. The safety committee can organize annual safety training events to refresh the safety message to all occupants and work with HR to ensure that new employees have received safety training.
- Investigate safety-related complaints.
- Investigate workplace accidents and report on the adequacy of prevention and mitigation tactics.
- Coordinate with insurance inspectors and law enforcement to ensure that vital evidence is not destroyed or tampered with during the cleanup process.
- Provide a point of contact between management and occupants on the issue of safety.
- Monitor facility conditions for safety and propose changes.

Training and promoting behavior changes

Training programs, whether developed in house or purchased from external sources, must be assessed for effectiveness and appropriateness for the intended audiences. Programs should differentiate between needs for knowledge about environmental health and safety and needs to perform specific tasks. They should include some form of testing to document completion and understanding of the training. The strategy must also address:

- How the training of new hires can be accomplished after the delivery of initial training to current occupants and staff.
- How to handle changes in conditions or equipment that affect safety procedures covered in training.
- When and how to refresh knowledge through retraining.

Incentives for adopting safe behaviors is a tricky issue. Organizations that have rewarded groups based on decreases in the number of reported accident have sometimes found that reports of decreases are bogus: Occupants and supervisors simply don't report accidents and, in that way, "cook" the data in order to receive the incentives. It is essential therefore to reward steps taken to promote or practice safety rather than accident report rates. For example, rewards might be given based on:

- Department scores on safety training tests.
- Evidence of new safety issues that have been identified and corrected.
- Observations of good compliance with safety policies and work rules.



Incident investigations

One of the possible functions of safety committees is to investigate incidents to determine possible causes. All incidents should be carefully investigated to ensure that their causes are correctly identified and fully understood. Then the appropriate corrective action can be taken. A thorough investigation may also mitigate liability in future accidents.

Incident investigations include:

- In-person inspections of the incident scene. The inspection should occur as soon as possible to ensure that the conditions that may have contributed to the incident have not changed.
- Interviews with the victim and witnesses.
- Documented reports of the evidence collected, the conclusions and the corrective actions taken. Hard copies of reports should be retained until the legal time limits for litigation are past.

Safety and third parties

Ensuring safety in the facility when third parties (e.g., contractors, visitors) are involved is a challenge for facility managers, who must ensure that these parties know and comply with the facility's policies and rules. In addition to a responsibility to protect facility property and occupants' safety, the facility manager shares with the contractor a responsibility to ensure the safety of the work crew.

To ensure the safety of occupants, facility property and the contractors themselves, facility managers should consider:

- Ensuring that safety records and employee safety training are criteria in selecting contractors and that records are checked. Facility managers should note, however, whether the practice of prequalifying contractors and subcontractors for their safety training and records is legally permitted in their areas.
- Including review and compliance with facility policies and procedures in the contractors' scope of work. These statements should describe the facility's expectations, work rules and conditions specifically (e.g., permits required, existence of potential hazards, requirements for worker drug testing).
- Providing contractors with safe work method statements and perhaps test their understanding. Some facilities require all visitors to view a brief safety training video or complete a quiz.
- Requiring work permits for hazardous work (e.g., confined entry, hot work). Permits would require inspections of work areas for compliance with facility safety guidelines.



- Reviewing a list of chemicals used by contractors and requesting substitutions, if possible, for problematic materials. Ensure that material safety data sheets and appropriate emergency response supplies are available at the work site.
- Ensuring that the contractor has plans in place to protect occupants from the effects of the work and to maintain indoor environmental quality.
- Including contractors in emergency drills. They should be aware of the location of alarm systems and the facility's emergency procedures.
- Auditing performance during projects to ensure compliance with the scope-of-work statement and the facility's safety policies. These audits should be included in records to guide future contracting decisions.

Since contractors may subcontract to other entities, facility managers must ensure that they are aware of these relationships and that subcontractors are held to the same expectations and requirements.

Providing necessary safety information to visitors is a challenge and requires understanding how visitors interact with the facility—where they go, whether they are escorted, how often they visit and how long typical visits last. Training and communication strategies can include having visitors complete a brief safety lesson and quiz on their first visit, repeating it annually perhaps. Floor wardens could be assigned to review evacuation routes and procedures with long-term visitors. Special training of these occupants may also be required in especially challenging environments, such as chemical plants.

Evaluate and implement corrective action.

After every event, the adequacy of the facility's safety measures and response should be assessed, gaps identified and plans drafted to address the shortcomings.

Safety measures should be verified periodically for their effectiveness and the tests and results documented.

Annually, perhaps in conjunction with the review of the facility's emergency management plans, the facility manager should review facility safety policies and processes, identify opportunities for improvement and respond accordingly. If a facility safety committee is in place, those members should be involved in reviewing data and discussing possible improvements.

The safety committee should review:

- Data such as the number of accident reports filed and workers' compensation (or on-the-job injury) claims submitted.
- Inspection reports, both internal and external.



- Accident reports, including insurer reports.
- “Near miss” reports.
- Post-incident (or “after-action”) reports. The safety committee may conduct incident debriefings, or “hot wash” discussions. These meetings focus on whether response protocols were followed completely and correctly.
- Safety training records of completion for visitor, new hire and refresher training.
- Post-training testing data that would indicate the degree of effectiveness of safety training.
- Changes in facility conditions or operations that may affect safety.
- Changes in incident response team members (e.g., ensure communication of changes, training of new members).
- Changed or new regulatory requirements that must be transposed into the organization’s policies, procedures and work rules—as well as responsibilities for tracking regulations to identify changes.

✦ Topic 3: Strategies to Increase Facility Security

Ensuring facility security involves protecting both employees and the organization’s assets from unlawful actions. It is critical for many facilities to know exactly who has entered the facility. This can affect complete evacuations of facilities in case of emergencies and protect occupants and assets from individuals entering the facility without authorization.

Security threats can be:

- **Internal or external.** Employees can steal from the organization and from each other. Thieves can break in and steal equipment or data. Shipments to or from the facility can be stolen in transit.
- **Minor or severe in consequence.** Losses can range from a stolen purse to assault or murder.
- **Physical or nonphysical.** Damage can include bodily harm and lost equipment and supplies; it can also take the form of stolen proprietary information (e.g., marketing plans and reports) or stolen customer or occupant personal data (e.g., credit or health data).

Depending on the organization, facility managers may be responsible for facility security or may work closely with security officers to develop and implement security strategies. The process described in Exhibit 3-16 can be applied to facility security.



Identify risks.

Organizational risk to occupants and assets will vary greatly, depending on the organization's business processes, physical facilities and culture. For example:

- An organization engaged in a politically or socially controversial activity may be vulnerable to physical and cyber attacks on its property and occupants.
- High levels of traffic, including visitor traffic, may make some parts of a facility more vulnerable to theft.
- An organization marked by poor supervisory skills and practices may have higher rates of workplace bullying and violence.
- Organizations that are known to handle large amounts of high-value data can be subject to hacking and theft of organizational, employee or client data.

As with all risk assessments, identifying the most likely vulnerabilities should be a cross-functional task. Facility managers should ensure the input of various departments or units (e.g., finance and accounting, IT, warehousing and shipping, research and development) and of different groups (e.g., supervisors, office workers, line or floor workers).

The risk identification process could include:

- Walking observation tours of facility security vulnerabilities and responses. This would be enhanced by the company of a security expert.
- Security audit by the facility's insurer or a security consultant.
- Review of workers' compensation (or on-the-job injury) claims over a fixed period of time (e.g., five years) to identify security-related injuries.
- Critical incident analysis. The facility manager and the security manager could review evidence from previous events to isolate common causes or patterns.
- Focus groups with occupants.
- Surveys and questionnaires.
- Benchmarking comparisons or discussions with comparable facilities.
- Discussions with local police or government officials.

Plan facility security strategy.

Exhibit 3-18 lists some of the tactics facilities can use to address security risks, employing policies and work rules, prevention and mitigation. Organizational culture, resources and vulnerability assessment should be considered before choosing specific strategies. For example, intensive entrance and exit visitor screening may be appropriate for a software development or high-tech operation, but this level of screening may not be acceptable or practical at a university.



Exhibit 3-18: Examples of Security-Oriented Tactics

Policies and work rules	• Visitor policy (e.g., surrender of passport ID at security) • Encryption policies for all data leaving the facility • Prohibitions against lending of IDs • Clearly communicated policy prohibiting occupants from—and possibly disciplining for—allowing an unauthorized individual to trail or tag along when the occupant passes through a secured entrance (sometimes called “piggybacking”) • Rules regarding use or removal of facility assets • Policies targeting potential for violent behavior (e.g., anti-bullying, guns on premises and in cars parked in facility areas) • Document shredding and electronic communication destruction procedures • Identifying documents as “confidential” or “privileged” (Unless documents are clearly marked as proprietary, defending ownership in court is difficult.) • Confidentiality agreements with all contractors working on site or with confidential information provided by the organization • Facility’s right to search occupants, work areas and lockers • Data privacy procedures
Prevention	• Pre-employment (or contracting) screening • Occupant training on theft prevention • Employee training on data protection tactics, especially when working/discussing in public areas (e.g., working on a laptop in a coffee shop or talking on a cell phone at the airport) • Training on “active shooter” emergency measures • Supervisor training on preventing bullying or detecting domestic violence or worker stress • Stress management/detection programs • Random drug testing (when appropriate to the industry/activity and legal) • After-hours security escorts to parking areas • For carded entrances, a system that can detect “piggybacking” and issue alarms • Automated intrusion alert systems • Installation of distress alarms throughout the facility • Closed circuit video surveillance systems • Security checks at entrances • Security lighting at access points • Facility or area access control via electronic IDs or biometric technologies (e.g., fingerprint scans, iris scans) • Scanning of all mail, packages and deliveries • Firewalls on Internet connections, system intrusion alerts • Document shredders at all copy/print stations
Mitigation	• Lockable personal storage for occupants (e.g., drawers, lockers) • Periodic inventories of facility assets • Periodic financial audits on departmental level • Use of radio frequency identification smart tags on shipments and high-value facility assets • Employing “stand off” distances and restrictive access at facility entry points (measures designed to prevent unscreened vehicles from approaching a facility) • Bomb barriers and shatterproof glass at entrances



FM should work closely with security to develop policies and procedures in this area.

Implement facility security strategy.

As with facility safety, communication and education play a critical role in maintaining facility security and in creating a consciousness of the need for security among occupants. Occupants should be made aware of the potential consequences of lapses in security, such as taking unencrypted sensitive information out of the facility on a laptop that is then stolen. Violations of policy must be consistently punished, according to policy.

If secured access systems are implemented, facility managers must ensure that occupants are provided IDs in a timely manner and are supported when problems, such as lost, damaged or deactivated ID cards, occur. A manual security process should be developed in the event of a power loss.

Facilities must also decide when they require the services of outside security consultants or firms. Security consultants can help facility managers determine the need for security (including where, when and how much security is needed) and develop effective requests for proposals from security companies.

FM must also implement its own data security policies and practices. The FM network and computers must be protected from unauthorized access through the use of firewalls and identification systems. Staff should be trained in good data practices, such as safe use of the Internet and data backup procedures. FM may consider working with IT to restrict access to certain types of Internet sites from the facility network.

Evaluate facility security strategy.

On a periodic basis, facility managers could measure their strategy's effectiveness according to:

- Reports of organizational committees, such as joint loss management committees, on safety and security incidents
- Changes in rates of loss of equipment and supplies, occupant and department reports of theft or reports of workplace violence
- Vandalism reports by facility management staff
- Communication and training events, such as training supervisors to detect the signs of domestic abuse

Strategies should also be assessed after major losses. For example, after an embezzlement of facility management funds, the facility manager should consult with an auditor to identify missing or weak controls against theft and



design practices that would deter theft in the future. After several campus shooting incidents, many educational facilities have reviewed not only their policies but their use of technology and even building furnishings.

Communication systems now use text messaging. Video surveillance cameras have been added at key points to identify and track an intruder's whereabouts. Hardware has been removed from the outsides of secondary doors to lecture rooms so that entrance can be controlled. Doors are designed to make it impossible to chain them closed and trap students inside.



Progress Check Questions

Directions: Read each question and respond in the space provided. Answers and page references follow the questions.

1. Which of the following are key business reasons to ensure workplace safety and security? (Choose all that apply.)
☐ a. Lost productivity and liability costs
☐ b. Ability to forgo insurance coverage
☐ c. Effect on image to prospective investors and employees
☐ d. Legal obligation to comply with federal and local laws and regulations
2. Following are the steps in creating a culture of safety and security. Number each stage so that they are presented in the proper order.
_____ a. Implement strategies.
_____ b. Identify risks.
_____ c. Evaluate and implement corrective action.
_____ d. Plan.
_____ e. Ensure management support.

Assign each of the following safety strategy tactical components on the left to its purpose listed on the right.

Safety strategy tactical component	Component purpose
_____ 3. Policies and work rules	a. Communicate expectations to occupants and staff.
_____ 4. Prevention	b. Lessen accident severity through preparation.
_____ 5. Mitigation	c. Remove or avoid causes of accidents.

6. Provide two examples of tactics for each of the following safety strategy tactical components.

Policies and work rules: _____

Prevention: _____

Mitigation: _____



7. Safety committees can support safety programs in which of the following ways? (Choose all that apply.)

- ☐ a. Review cases of employee safety violations to determine appropriate penalties.
- ☐ b. Review new equipment, processes or projects for potential safety implications.
- ☐ c. Review and endorse safety policies and work rules.
- ☐ d. Investigate accidents to identify causes.

8. List three examples of tactics for managing contractor relations and projects to improve facility safety.

9. A new facility director has just been hired at a large shopping mall. The mall manager gives the facility director a file of incidents in the past year and a copy of the current mall security strategy and asks the facility director to decide whether the strategy needs to be revised. The facility director reviews the material. What other steps could the director take to ensure that the mall is protecting itself against the right threats?

10. As part of his research into mall security issues, the facility director in the previous question reads an article about a “wilding” incident at a similar mall. A mob of youth used cell phones and social media to initiate and, to some degree, direct an assault on the mall, its stores and shoppers. Stores were vandalized, and there were reports of theft from both stores and shoppers. What tactics might the facility director implement to manage this threat to facility and occupant security? Provide one example for each category of tactics.

Policy and work rules	
Prevention	
Mitigation	



11. Which of the following would be effective measures of the mall's security strategy in dealing with the threat described in the previous questions? (Choose all that apply.)
- ☐ a. How long it takes security staff to locate intruders during a drill
 - ☐ b. Whether the mall is able to prevent an incident of the type described
 - ☐ c. Occupant perceptions of security gathered through random interviews with shoppers
 - ☐ d. Installation of quick locking systems on all storefronts



Progress check answers

1. a, c, d. A survey conducted by an American insurer found that a majority of business leaders believed that an investment in injury prevention doubled its value through increased productivity. In addition to increased productivity, organizations conscious of safety and security also enjoy a stronger and more positive image. Another factor driving facility action in this area is compliance with federal and local laws and regulations. (p. 3-58)
2. The correct order is as follows:
 - 1—e. Ensure management support.
 - 2—b. Identify risks.
 - 3—d. Plan.
 - 4—a. Implement strategies.
 - 5—c. Evaluate and implement corrective action. (p. 3-59)
3. a. Policies and work rules can be used to communicate expectations to occupants and staff. (p. 3-61)
4. c. Prevention aims at removing or avoiding causes of accidents. (p. 3-61)
5. b. Mitigation allows that some accidents will happen but lessens severity through preparation. (p. 3-61)
6. Following are some of the acceptable answers for each component. For a complete list, review Exhibit 3-17.

Policies and work rules:

 - Whistleblower protection for those reporting unsafe conditions or practices
 - Requirements for the use of safety equipment, such as breathing masks or protective eyewear
 - Documentation of accidents, safety audits and completion of training

Prevention:

 - Regular inspection of safety devices on operating equipment
 - Substitution of nontoxic materials for hazardous materials where possible
 - Appropriate lighting levels

Mitigation:

 - First aid supplies and training
 - Eye-washing stations
 - Training about accident response (p. 3-62)
7. b, c, d. Safety committees can support safety programs in any of the following ways:
 - Review new equipment, processes or projects for potential safety implications.
 - Review and endorse safety policies and work rules.
 - Provide a point of contact between management and occupants on the issue of safety.
 - Monitor facility conditions for safety and propose changes.
 - Investigate accidents to ensure that their causes are correctly identified and fully understood. (p. 3-63)
8. Any of the following are acceptable examples of contractor management tactics:
 - Ensure that safety records and employee safety training are criteria in selecting contractors and that records are checked.
 - Include review and compliance with facility policies and procedures in the contractors' scope of work.



- Provide contractors with safe work method statements and perhaps test their understanding.
 - Require work permits for hazardous work.
 - Review chemicals used by contractors and request substitutions, if possible, for problematic materials.
 - Ensure that the contractor has plans in place to protect occupants from the effects of the work and to maintain indoor environmental quality.
 - Include contractors in emergency drills.
 - Audit performance during projects to ensure compliance with the scope-of-work statement and the facility's safety policies. (p. 3-65)
9. The facility director might refer to professional associations or interview facility directors at similar malls and conduct focus groups with store owners and security guards to capture trends that may not have appeared in arrest data or reports. The facility director might also observe mall operations at different times and places to identify potential threats. (p. 3-68)
10. Policy and work rules:
- Shoppers under 21 may not congregate in groups of more than three.
 - All store personnel must be trained in a quick lockdown procedure to secure property and provide protection for shoppers and employees.
- Prevention:
- Increase video surveillance capabilities to locate potential sources of problems or violations of congregation policies quickly.
 - Increase the number of security guards.
 - Ensure that new policies are being applied without bias.
- Mitigation:
- Install quick lockdown equipment on all storefronts.
 - Create a special number to text security to report flash mob behavior. (p. 3-69)
11. a and d. These metrics can produce objective data about how successful the facility has been in implementing its security tactics. In this case, changes in perception would not be reliable in predicting security, and preventing the event might not be realistic. The facility can only mitigate its effects. (p. 3-70)



Chapter 4: Employee Development

After completing this chapter, students will be able to:

- Describe the basic challenges FM faces in managing employee performance.
 - Explain why facility managers may not fulfill their responsibility to develop the organization.
 - List the four essential activities in meeting organizational and employee development needs.
 - Provide examples of internal and external factors that affect facility staffing.
 - Explain the benefits of having good job descriptions for organization positions.
 - List the steps involved in managing employee performance.
 - Describe factors facility managers should consider when using different training solutions.
 - List the steps in on-the-job training.
 - Provide examples of internal and external resources for employee professional development.
-

✦ Topic 1: The Case for Employee Development

This chapter examines how facility managers support the performance of the entire organization by focusing on the human factor in the FM organization. Facility managers have the responsibility and opportunity to ensure that the FM organization has the human resources needed to achieve the strategic goals of the entire organization and FM itself. This is a complex challenge:

- The strengths of the FM organization must be aligned with strategic goals that may be periodically revised in response to various internal and external factors. The goal is continually changing. The employee who fit the organization 20 years ago will not, in most cases, meet the same organization's needs today. The most obvious example of evolving staffing needs in FM is in the area of technology. Mechanical expertise is no longer sufficient for an FM organization; at least some of its members must be proficient in automated computer systems and systems analysis.
- The FM team must be analyzed and managed like an investment portfolio. High-performing employees must be retained if possible; low performers must be improved or removed. A team cannot afford to support inadequate members for long. Between those two ends are average employees who are important to the organization and who need management and development to sustain and improve their performance.



- FM must track employee turnover rates, identify the right employee turnover level for the organization and avoid exceeding it. In general, high rates of employee turnover are problematic for an organization. If one considers both direct costs (e.g., advertising, training) and indirect costs (e.g., lost productivity, lost training investment), the cost of replacing an employee can be at least as much as that employee's annual salary. For employees with special skills or for managers, the cost could be double or triple the salary. It is important for facility managers to know the organization's optimal turnover rate as well as appropriate variances for this goal. If turnover rates are too high, facility managers must identify and address possible causes, which could include poor supervisory skills, lack of career and development opportunities, wages and benefits inconsistent with area norms and work conditions (e.g., schedules, amount of overtime, stress).
- Despite a manager's best efforts, good employees will leave. Younger workers (those born after 1980) tend to change jobs more often than their parents' generation. Local labor market conditions may also affect turnover. For example, in India some IT firms see an annual turnover rate of 50 percent. Turnover is not an entirely bad thing, since it offers opportunities to bring new skills and perspectives into the organization and to increase the diversity of the FM staff. However, those leading the FM organization must be prepared for turnover and develop a "pipeline" of employees who can step into vacancies with minimal disruption.

A common thread throughout these challenges is employee development. The organization cannot grow unless its people are growing. As Brian Atkin and Adrian Brook state in *Total Facilities Management*: "The entire organization should be subject to continuing professional development as an example of its commitment to lifelong learning and a drive for continual improvement." Or as one facility manager explained, "In our organization, if you're not growing, you're gone."

Obstacles to good employee management

Fulfilling this competency requires that facility managers shift from their usual focus on the built environment to people, a shift for which they may not feel trained or an activity they may not feel is as important as the technical and business aspects of facility management. Other contributing factors include:

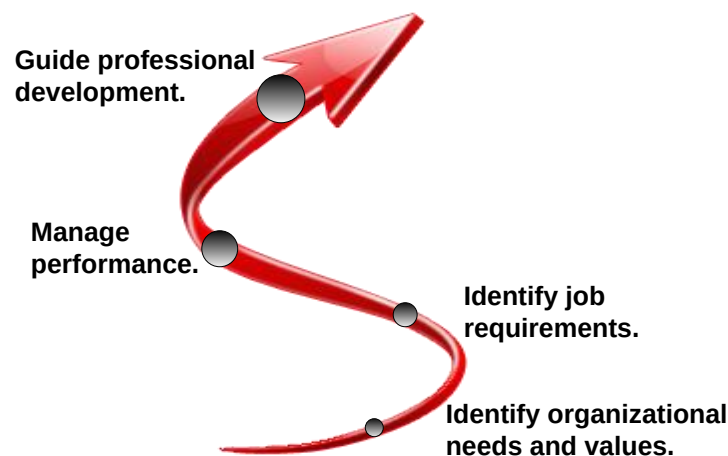
- Not developing a longer perspective of the organization and the way its needs might evolve. If managers are rewarded for short-term results, they will not focus on solutions such as employee development that may take years to produce results.



- The “like me” hiring fallacy. Managers feel more positively about people with similar backgrounds. The problem is that this tactic will not move the organization forward but will simply reinforce current ideas and perspectives.
- Preconceptions or prejudices that impose limitations. For example, a manager may be skeptical of younger employees’ work ethic or older employees’ ability to adapt and grow.
- A tendency to “pigeonhole” employees—to see only their present capabilities and not their potential.
- A low tolerance for risk that may keep a manager from hiring someone outside the usual range of employees.
- A dislike for and a lack of patience with teaching employees so that they can develop necessary skills and knowledge.
- A belief that it does not make business sense to invest in employee development. Why pay to create a better employee for some other employer, because the employee is bound to leave for better opportunities? The answer here is that the employee may not leave if there are opportunities. If such employees do leave, they become a walking job advertisement for the organization that helped shape them. And they may return some day. Hewlett-Packard Germany has a special program aimed at rehiring employees. (The program includes a one-time bonus for employees who make the referral.) The company has a 30 percent rehire rate, and the rehired employees tend to be extremely loyal.

The rest of this chapter focuses on the arc of employee development activities shown in Exhibit 3-19.

Exhibit 3-19: Meeting Organizational and Employee Development Needs



The task of managing the organization's human resources begins with gaining a better understanding of the kind of employees the facility organization needs today and in the next five or 10 years. The process continues with a careful definition of the competencies required to perform a job and what exemplifies outstanding, satisfactory and unsatisfactory performance. These organizational needs and expectations guide hiring and the start of the employment relationship. Once expectations have been communicated, the process of managing to improve performance begins, including such activities as training on and away from the work floor and coaching. As the employee masters the present job, the manager and the employee should begin to discuss the future. What opportunities can the manager provide to the employee to support both the organization's future needs and the employee's career interests?

✦ Topic 2: Identify Organizational Needs and Values

Every hiring, promotion or development decision should be aligned with the facility's strategic plan, which is, in turn, aligned with the organization's plan. This will ensure that strategic priorities, both long- and short-range, are reflected in personnel decisions.

Facility managers must be aware of the implications of strategies on staffing. For example:

- If the decision has been made to outsource significant amounts of facility work, future and current facility managers will probably be shifting their focus from supervisory tasks to strategic management activities that require the ability to analyze data from multiple sources, communicate with stakeholders and control the outsourced activities to ensure a specified level of performance.
- A property management firm committed to increasing tenant satisfaction levels at its buildings will need managers who are familiar with quality issues, can build and motivate building teams and can communicate proactively and effectively with tenants and occupants.
- A university campus that is committed to sustainable operations will need to increase its development activities on applying the principles of sustainability to building operations and maintenance.
- A campus for a medical device manufacturer that has invested in automation to improve energy efficiency, decrease interruptions in its processes and increase security will need technicians familiar with new systems and able to communicate with vendors.



In addition, facility managers must be vigilant about the possible effects of internal and external environmental trends on the skills facility managers and technicians need to do their jobs. For example:

- The influence on senior management in an organization has shifted from operations to finance. What can facility management do to equip managers to speak the language of these new influencers?
- A metropolitan area is experiencing an influx of non-native speakers who will be an attractive source of labor for the facility. How can the facility prepare for this future job market? Should supervisors and managers be offered language and cultural awareness training? How can existing new-hire training materials be adapted to this new audience?
- Because of a poor track record on workplace safety, a facility is facing tougher regulatory oversight. The issue of safety must be woven into all job descriptions and performance appraisals. Managers and supervisors will need to understand regulations and possibly negotiate with regulators.

Whenever the facility strategy or the organization's environment changes, it is time to revisit job descriptions, performance management resources and career development plans.

In addition, employee development will be shaped by the organization's values, which will inform hiring profiles and performance standards used for appraisal and development purposes. Values might include the following:

- Teamwork and mutual support
- Diversity
- Internal and external customer focus
- Honesty
- Safety consciousness
- Adherence to rules
- Adherence to business, organizational and professional ethical standards
- Creativity in problem solving
- Trust (Building and sustaining an environment of trust within the organization is key to establishing good manager-employee relationships.)

Case study: School District #11

The following case study has been designed to illustrate some of the issues and skills involved in this competency area:

- Providing personal and professional growth and development opportunities
- Implementing a performance appraisal system
- Encouraging diversity



The case study describes the personnel challenges facing a fictional facility manager for a school district, Christine. She spends a considerable amount of her time trying to find ways to maintain and build the district's physical assets within a tight budget. However, she is also responsible for managing district staff. As the case study develops in the following chapters, Christine will demonstrate her competency in this area.

The case study begins as Christine turns her attention from building systems to building people.

School District #11 Case Study

Christine is the facilities manager for an elementary and secondary school system. There are 16 classroom buildings, a senior citizens' center, an operations center with district offices and a full maintenance shop, a warehouse and one currently unoccupied building. Each building has its own manager, except the unoccupied building, which is managed by the manager of the district headquarters building.

Local taxpayers have resisted increasing funding to maintain the buildings properly. However, some of the buildings have reached a state that is not only embarrassing but also potentially very expensive. Energy bills have been extremely high. Buildings could be deemed unusable from a safety perspective, and there could be injuries or illnesses that cause liability claims. So the school district supervisor and Christine think it is likely the public will eventually approve larger operating and capital improvements budgets. Their long-range planning will include this strong possibility.

When she has a moment to think strategically, Christine ponders how her staff hiring and development programs can better reflect the community the school system serves. The economy has been poor in this area for at least 20 years, and chronic unemployment is high. She speculates whether the facility's high turnover rate is related to the fact that so many new hires are not prepared to work and have few technical skills. Only a few of the building managers are interested in managing people; most were promoted over the years from more mechanical or operational positions. Their first solution to poor performance is to terminate employment. Christine worries that a terminated employee will file an antidiscrimination claim against the district eventually.

The building managers are a problem in another way. They all have technical educations and are poor communicators, especially in writing. Actually, their presentation skills are poor, too. She remembers sitting through a building presentation to the school board members and watching their frowning faces as the building manager stumbled through a long, overly technical report. Increasingly, all the district managers are being asked to represent the schools and their needs to the public in general—to parents, government officials, business leaders and community representatives. They need to be more professional and more creative and effective in conveying the district's facility challenges.



In her new facility plan, Christine spends time describing these needs and the impact they should have on the facility performance management and career development system. She makes the following points:

- The facility must address the issue of work readiness. It is both a practical and an ethical responsibility.
- The performance expectations of all staff, but especially building managers, must be revised to include employee development goals.
- Building managers must be ready for the possibility that facility property will be undergoing considerable improvement in the next decade. They must be knowledgeable about new technology and design concepts that can control costs and improve the district's ability to meet the needs of its customers. They must have superior project management skills.
- The facility must adopt a lifelong learning philosophy that is in keeping with its educational mission.

✦ Topic 3: Identify Job Requirements

Job requirements are usually defined through job observations or interviews and by analyzing the characteristics associated with satisfactory job performance. An accurate and valid understanding of what is required from an employee to perform a given job is essential to an organization for a number of reasons:

- It provides an opportunity for the organization to align job applicants' and employees' abilities with what the organization needs.
- Accurate descriptions of job requirements help organizations recruit applicants with the right type of qualifications.
- Job requirements provide a starting point for managing employee performance by explaining what is expected in a given position.
- They guide employee development activities and ensure that development is aligned with the organization's needs.
- Valid descriptions that accurately reflect job requirements can help protect employers against claims of discrimination in hiring and promotion. Because job descriptions can have serious legal implications, facility managers should ensure that descriptions are reviewed by the human resources function or the organization's legal department.

FM should ensure that job descriptions exist for all staff positions, that they are accurate and comply with legal requirements and that they are updated regularly. HR can be a good partner in performing this management task.



Job descriptions

A job description is a brief (often one-page) summary of the most important features and requirements of a specific position. It is generic, not written to describe a specific employee but rather a group of employees performing similar work.

Job descriptions might specify:

- Essential duties and responsibilities (e.g., schedule and oversee repair and maintenance activities in Building X, meet monthly with tenant representatives to discuss changes in facility procedures and collect feedback).
- Standards that signify acceptable performance (e.g., ensure that tenant complaints are resolved within 48 hours). The issue of describing performance standards will be discussed further in the next topic.
- Knowledge, skills and abilities required to perform duties and fulfill those responsibilities (e.g., knowledge of a specific building automation product, group presentation skills, good organizational skills, patience).
- Education requirements, required certificates or licenses (e.g., college degree, engineer certificate).
- Physical requirements (e.g., ability to lift a certain weight for a specified number of times each day).
- Reporting structure.
- Job grade.
- Salary bandwidth.
- Additional benefits.

Exhibit 3-20 on the next page shows a generic job description from an IFMA report on the profession. The full report is available in the online Resource Center.

An addition to a formal job description is a list of competencies and characteristics required to perform the job. Competencies are high-level skill areas rather than specific accomplishments such as a degree or experience supervising employees. Characteristics usually describe desirable personality traits or attitudes. This approach is more appropriate for supervisors and managers, who may have to react to and solve more complex problems, than it is for line positions, where responsibilities can be very clearly defined.



Exhibit 3-20: Generic Job Description for a Facility Manager

This position is responsible for facility planning, operations and maintenance. The position manages the local facility business function for the purpose of supporting the organization's goals and objectives. Scope can be a single building, portion of a large building or small campus. Develops and implements system life-cycle programs to maximize efficiency, length of service and utilization of facility assets. This person manages a staff of employees, contractors, and/or supervisors in the operation and maintenance of buildings and grounds.

Responsibilities:

- Develops and implements business processes that ensure cost-efficient facility operations and minimize/eliminate unplanned infrastructure and building systems downtime.
- Develops and manages local facility operating budget.
- Develops short- and long-term facility utilization plans.
- Manages, at the department level, loss, injury prevention programs and compliance with environmental, health and safety standards.
- Manages security, alarm and fire suppression/detection systems and ensures compliance with applicable building, fire, electrical, mechanical system standards and codes.
- Manages contractors and outsourced services.
- Provides oversight for capital projects and local project managers.
- Responsible for effective cost management associated with maintaining the facility, equipment and furnishings.
- Supervises administrative support functions as required.
- Develops facility operations and maintenance policies, procedures and work instructions.

Reports to:

Director or Vice President

Reporting to this position:

Facility Maintenance Supervisor, Facilities/Project Engineer, Facility Planner, site staff

Qualifications:

Bachelor's degree or equivalent experience and at least five years' experience in a related field or trade. Thorough understanding of building construction and associated trades. Ability to read blueprints. CFM and/or additional industry certifications required. Proficiency in spreadsheet and database software applications. CAD or CAFM a plus.

Exhibit 3-21 shows competencies and characteristics for a building manager in School District #11.



Exhibit 3-21: Building Manager Job Competencies and Characteristics

Job-Related Competencies	
• Perform and manage others to produce results that demonstrate timeliness, cost-effectiveness and attention to quality • Ability to set objectives and priorities, schedule and delegate work • Conflict resolution • Identifying and meeting needs of internal and external customers • Continuous improvement orientation • Commitment to lifelong learning for oneself and supervised employees	• Creating and supporting a diverse workplace • Ability to listen effectively and provide effective feedback • Effective business writing and oral presentations • Coaching employees to improve performance • Compliance with organization policies, procedures and work rules
Job-Related Characteristics	
• Ability to admit and correct mistakes • Ability to work effectively with diverse employees and stakeholders • Openness to change	• Fair, honest and ethical behavior • Emotional intelligence • Optimistic and persistent attitude

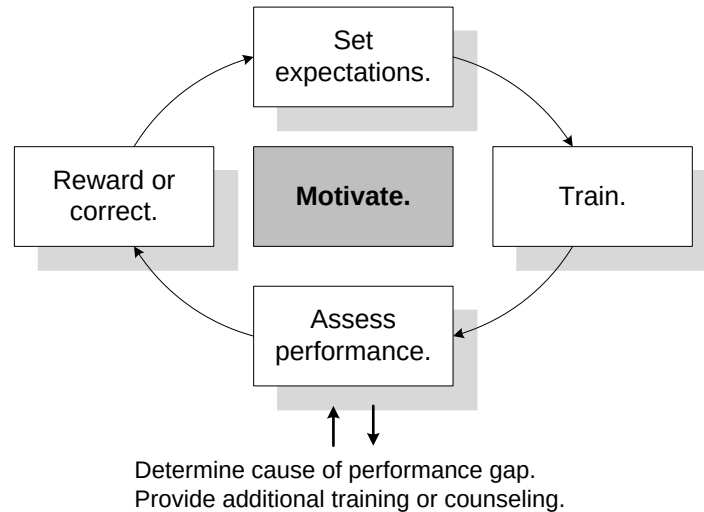
It is important to note that an employee hired for or promoted to a new position does not necessarily have to possess all the competencies described. For example, an organization may designate essential training that must be completed at the time of hiring or promotion. In the example of a building manager, the new employee might be required to demonstrate most of the competencies listed and show mastery of managing for results and delegating work when assigned to the position. The new building manager may then focus on developing the other competencies listed—e.g., taking training in business writing or presentation skills, completing diversity training.

✦ Topic 4: Manage Performance

As Exhibit 3-22 on the next page illustrates, managing employee performance is a continuous cycle of:

- Setting expectations of both the facility organization and the employee—performance targets or goals.
- Observing and evaluating whether the performance meets expectations.
- Identifying and removing obstacles to satisfactory performance.
- Providing recognition, acknowledgement, rewards or corrections as needed. (A more detailed discussion of motivating employees appears in the *Leadership and Strategy* competency.)



Exhibit 3-22: Performance Management Cycle

The cycle is repeated through every performance planning period; it will vary as employees mature in their positions and in the organization. Throughout the cycle, the manager motivates performance in a manner appropriate for the employee. This may involve periodic positive feedback on accomplishments, listening and encouragement, challenge or public recognition.

Documenting performance communication

All discussions and communications about performance should be documented in an employee's personnel file to:

- Improve the quality of communication and the level of comprehension and agreement between manager and employee. Documentation serves as a reference for future discussions or questions. Some organizations require that employees sign documents to ensure that they have been notified of a concern or expectation and understand it.
- Comply with organizational policies and employment laws.
- Decrease the chances for litigation over working terms/conditions, distribution of career development opportunities, promotions and terminations.

Set expectations

At the beginning of the performance cycle, the manager and the employee meet to discuss expectations and set objectives for the coming period. Performance standards may be a good starting point in planning the discussion. Performance standards describe what behaviors employees should demonstrate and what results their job activity should produce. Standards may therefore combine skills (what the employee can do or produce),



knowledge (areas in which the employee has some level of expertise) and attitudes (how the employee demonstrates the values important to the organization in the course of work).

Expectations should be explicit, not assumed. For employees new to a position, the manager describes the standards that will be used at the end of the period to appraise the employee's performance. Vague or unstated expectations lead to disappointment on both sides. From a legal perspective, it can hamper what an employer can do with an employee who is consistently underperforming. If there are expectations about dress, they should be explained now. If tardiness violates organizational policy, the employee should be made aware of the seriousness of being late for work.

Effective goals

For more experienced employees, performance goals may be added to job expectations. Performance goals are in addition to normal job expectations; they do not replace them. For experienced employees who have mastered the expectations associated with their positions, managers may propose "stretch" goals. These goals require a significant investment of time and energy by the employee but offer an opportunity for personal growth and perhaps development toward career goals.

Effective performance goals:

- Are created by a collaborative effort between the manager and the employee. The employee must feel a sense of control in choosing goals and an investment in the outcome of the development effort. At the same time, the organization must also benefit from the activity directed at attaining the goal.
- Target development of a specific skill, knowledge or competency.
- Contribute to an employee's sense of confidence, job satisfaction and engagement in work.

Effective goals fulfill the "SMART" criteria, which are discussed in the *Leadership and Strategy* competency. They are specific, measurable, achievable, realistic and timely. "SMARTER" objectives have added the goals of ethical behavior or environmental awareness and rewards and reassessment.

Exhibit 3-23 summarizes recommendations about what to do and what to avoid in setting expectations for FM staff.



Exhibit 3-23: Setting Expectations and Goals for FM Staff

What to Do	What Not to Do
Tie performance expectations to the FM organization's strategy. This increases understanding of the strategy and commitment to it. Understand the employees' perspectives. Make sure difficulties are identified and thought through. Check in often to identify frustrations before they grow. Clear away organizational obstacles that may prevent employees from meeting expectations and goals.	Sabotage motivating stretch goals by redirecting staff to distinctively less ambitious goals (e.g., from "identify energy-saving tactics" to "use fewer supplies"). Shift strategic initiatives and staff roles frequently. Pay insufficient attention to coordinating and supporting staff activities. Assign audacious goals that are unattainable and encourage cynicism and loss of purpose.

Source: Teresa Amabile and Steven Kramer. "How Leaders Kill Meaning at Work." *McKinsey Quarterly*, January 2012.

Developing performance standards for employees is challenging because it requires translating often abstract competencies into measurable results. For example, Christine, the facility manager of School District #11, wants her building managers to commit to lifelong learning. What does that mean exactly?

School District #11 Case Study (continued)

Christine could explain to a new building manager that she expects the manager to attend a certain number of educational events each year and the employees in that manager's building to participate in some form of training as well. Her expectation that building managers perform in a customer-focused manner could mean that managers:

- Survey teachers and students and their families every year and report the actions the manager has taken to address the needs uncovered in the survey.
- Meet monthly with the school leadership in their building to identify and address teachers' issues quickly.
- Report annually to district management on actions taken to achieve district objectives for their building and the results of those actions.

When appropriate, managers can provide examples of outstanding, satisfactory and unsatisfactory performance. This will help focus employee efforts during the period and assist the manager during the appraisal later. For example, in the



District #11 case study, Christine defines performance for her building managers in the following way.

School District #11 Case Study (continued)

Christine translates the general performance competency statement “Perform and manage others to produce results that demonstrate timeliness, cost-effectiveness and attention to quality” into three levels:

- **Outstanding** = All school building projects are completed within schedule and budget. All maintenance projects are completed on schedule. The building meets its annual operating budget. Staff turnover is no higher than five percent. Quality audits of school building conditions by district personnel show a score of at least 90 percent.
- **Satisfactory** = The majority of building projects are completed within schedule and budget. Ninety percent of maintenance projects are completed on schedule. The building does not exceed its annual operating budget by more than two percent. Staff turnover is no higher than eight percent. Quality audits of school building conditions by district personnel show a score of at least 75 percent.
- **Unsatisfactory** = The majority of school building projects are not completed within schedule and budget, or a project exceeds schedule and budget by more than 15 percent. The building exceeds its annual operating budget by more than five percent. Staff turnover exceeds 10 percent. Quality audits of school building conditions by district personnel show a score below 65 percent.

The employee’s expectations should be made clear as well. For example, an employee may request a certain allocation for attending off-site training or flexibility in a schedule to meet family demands.

In subsequent performance periods, expectations may focus on improving satisfactory or unsatisfactory performance and on developing new job-related competencies—skills or knowledge associated with mastery of the position but that the employee has not yet acquired, such as presentation or negotiating skills.

Train

The purpose of training is to ensure that employees have the knowledge, skills and confidence they need to perform to expectations. Employees can receive off-site and/or on-the-job training (OJT). Off-site training occurs not in the workplace itself but in real or virtual classrooms, which may or may not be in the facility. OJT takes place in the context of the workplace itself, although the learner has the same opportunity as in off-site training to ask questions and practice. In many workplaces, employees receive both types of training at some point in their careers.



Whatever type of training is used, the content should be aligned with the competencies required for the specific job. Conveying information or skills that will not be used in the immediate future is probably an ineffective use of the organization's resources. The sooner the employee can apply the new knowledge or skill in the actual work context, the better the employee will understand the information or skill and remember it.

New employee training

Training for new employees should also include experiences that speed the process of integrating the employee into the established social fabric of the workplace. Socialization or “onboarding” extends beyond new-hire orientation, which typically includes communication about organization policies and procedures, such as attendance policies or emergency evacuation procedures. New-hire training should also help employees understand the organization's values and begin to establish individual relationships with co-workers. Sometimes peer or “buddy” mentor programs—pairing new employees with more tenured employees—can speed the socialization process. However, peer mentors must be selected carefully, with attention to their attitudes to the organization and its values, the quality of their own job performance and their ability to communicate.

Off-site training

Off-site training refers to training that is completed away from the job site. It could be genuinely off-site—at local colleges and technical schools, for example—or it could actually occur within the facility—through, for example, e-learning or facility classroom training. Training could be developed in house or purchased from third parties. It could also be provided by independent institutions, such as unions or professional organization like IFMA.

Whatever the source of the training may be, managers must be responsible for its effectiveness. The costs of ineffective training are not just wasted money and time. Ineffective training means lost opportunity and possibly misinformation. It can also damage employees' attitudes toward future training.

So facility managers should review off-site training options carefully before adopting them. They should consider:

- Do the programs have specific learning objectives that describe what the learners will be able to do after the training? Are the objectives aligned with the organization's and the job's requirements?
- Do the learning experiences accommodate different learning styles—e.g., not only those who learn from hearing lectures or reading manuals or



online text but also those who learn best by practicing the skill or applying the knowledge?

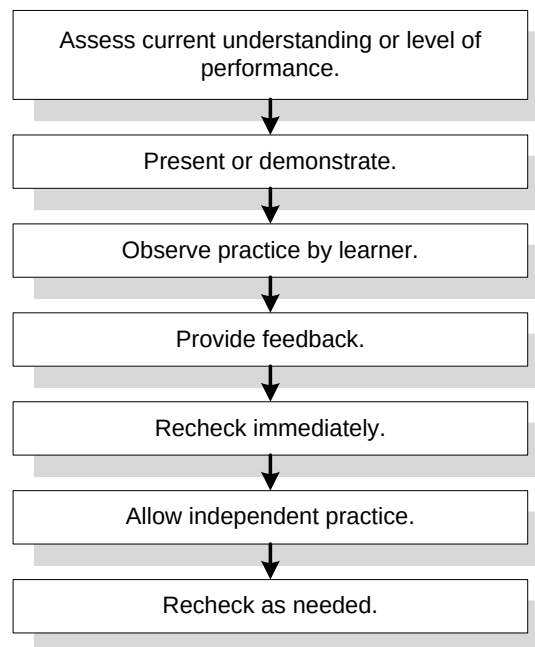
- Is the training's effectiveness validated through testing of results? Has there been a measurable increase in the employee's knowledge or skill level? Has the training produced the results described in its learning objectives?

On-the-job training

On-the-job training can also be described as coaching. The essential steps in the process are as follows (see Exhibit 3-24):

- Assess what the learner already knows and adjust objectives accordingly.
- Communicate the information or demonstrate the process to be learned in a step-by-step manner, allowing the learner to ask questions.
- Allow the employee to practice the knowledge or skill.
- Observe and provide feedback that assesses what has been observed against the model process.
- Recheck the employee's performance immediately.
- Allow the employee to perform the task independently for a period without direct observation.
- Recheck performance. Ask questions about the learner's experience, observe performance and provide feedback. This step is repeated periodically but at increased intervals as the employee demonstrates mastery and confidence.

Exhibit 3-24: On-the-Job Training Process



OJT can take many forms. It can be applied at all levels, from entry positions to senior management. It can be used to acquire knowledge, physical skills or “soft skills” such as emotional intelligence. When employees are rotated through other positions, OJT can be used as a career development tool or a way to ensure adequate workforce resources. (Job rotation and cross-training are discussed in Topic 5 of this chapter.)

OJT can be proactive—undertaken to teach a skill before the employee attempts to perform it. For example, a supervisor shows a new building engineer how to maintain a boiler by demonstrating the process for the new employee, commenting on important aspects or requirements during the demonstration and checking the employee’s understanding of the process. Alternatively, OJT or coaching can be corrective—delivered after unsatisfactory performance has been observed by a manager or supervisor. For example, a manager observes a building engineer engaging unsuccessfully with an occupant unhappy about the office temperature. The manager and the engineer can sit down and discuss what the manager saw and what would have been a more effective way of communicating with the occupant. OJT can also be delivered by managers, supervisors or peers. It may be scheduled in a formal manner or delivered in a spontaneous fashion, with managers dropping in to observe employees as opportunities arise.

As with off-site training, facility managers should be cautious about using on-the-job training or coaching and consider the following questions:

- Is the coach sufficiently competent in the knowledge or process being demonstrated?
- Are coaches sufficiently trained in observing performance and delivering feedback? To be useful, feedback must:
 - Offer a manageable amount of correction. Twenty corrections after the first observation/check will not produce all of the instructed changes. It is better to focus on prominent issues and then rely on subsequent rounds of coaching to catch secondary points.
 - Clear, precise and understood. Coaches should always question learners to gauge their understanding of what has been said.
 - Positive in its goals. This does not mean that all feedback messages start with something positive, nor does it mean that there should be an equal number of negative and positive comments. It means simply that the goals of feedback are to improve performance and create confidence.



- Are coaches presenting a consistent message about the performance the organization wants? Will learners have the same priorities? Will they take the same precautions?
- Can the coaches distinguish between coaching and micro-managing their employees?

As the next topic on guiding professional development suggests, providing existing employees opportunities to coach new employees is an excellent way for employees to develop skills they will need to achieve their personal career goals. However, ineffective coaches can do a great deal of harm to the new employees and the organization. They should be trained and, yes, coached in their coaching skills.

Succession training

Employee development can benefit both the organization and the employee. Facility managers should manage for depth in their employee portfolio. The function is at risk if only one employee knows a particular area or system or can perform a critical skill. Succession planning is a human resource strategy that focuses on having trained people “in the pipeline” to fill positions critical to the organization if they become vacant. This strategy benefits the organization by managing its staffing risks and the FM employees by providing career development tools.

The first step in addressing this risk is to identify human resource gaps in the FM organization. This is done by cross-referencing the job descriptions of all positions in the organizations against a staff inventory that describes each individual’s competencies. HR may have an automated performance management system that can assist in this task. The output is greater awareness of the organization’s “thin” talent spots. This allocation of talent can also be analyzed in the context of the organization’s risk management process. For example, FM could determine whether it has enough technicians to operate facility systems if half of the staff is not able to report for work. (Risk management strategies are discussed in detail in the *Emergency Preparedness and Business Continuity* competency.)

The second step is to develop current staff so that they have the skills to step into these positions when necessary. This can be accomplished through formal off-site training but also through OJT. Candidates should be chosen carefully from among those who have already proven their ability to learn, apply and excel. Succession training strategies often include cross-training and job rotation, which are discussed in the next topic.



Training at School District #11

In the case study example, school district facility manager Christine has developed learning paths for each of the positions in her organization to encourage and support FM employee career development.

School District #11 Case Study (continued)

The learning paths in School District #11 specify training to be completed and the time frame within which it must be completed. Courses may address job-specific skills, district policies or safety. For example, the training required for assistant building managers includes the following:

Job-specific:

- Facility management practices (within first year)
- CMMS skills (within six months)
- Metrics and reporting (within first year)
- Leading teams (within first year)
- MS Office applications (within six months)

Policies:

- Prevention of workplace harassment (within first six months)
- Computer security (within first month)
- Hiring practices (within first year)
- Workplace ethics (within first six months and annually)
- Safety and security orientation (upon hiring and annually)

Safety:

- Creating safe workplaces (within first six months)
- Hazardous materials awareness (within first month)
- Accident investigation (within first three months)

In some cases, Christine recognizes that new employees may have some of these skills. In those instances, she uses coaching, assigning employees a task requiring the skill and assessing whether the employee needs formal training.

Assess performance

The next stage in the performance management cycle is for the facility manager to assess the employee's performance against expectations. Performance assessment can occur at different times. For a new hire, performance may be assessed formally after training and an appropriate amount of time on the job. For a current employee, there may be a formal assessment before the annual performance review.

However, assessment also occurs informally as opportunities and needs arise. For example, an employee may be observed performing in a quality manner, following the rules or supporting a team member. Managers should provide positive feedback at that time. This reinforces the employee's performance and motivates continued positive performance.

Conversely, if poor performance is observed, managers should not wait until the next formal performance meeting to address the gap. As soon as possible—and preferably in private—the employee should be made aware of specific behavior



that needs to be addressed , the causes determined and solutions developed. Some of these solutions, such as peer mentoring, are discussed in the next topic.

The manager must decide whether it is appropriate to remediate the performance or to begin the process of discharging the employee.

Remediating performance

If the performance gap is related to a misunderstanding or miscommunication of expectations, the manager can discuss expectations—both the organization’s and the employee’s—with the employee. If a new hire or someone new to a position has misunderstood the nature of the job, this will entail a longer discussion. Does the individual think he or she can eventually accept what the job entails and perform at the required level? If not, it may be better to end the relationship now. Can a promoted or transferred employee return to a previous or similar position? Would further training or experience help address this misalignment of expectations and job realities? If an experienced employee is having trouble meeting performance goals, the cause needs to be determined. Perhaps the manager and the employee underestimated the amount of time or support required to accomplish the goal.

If the performance gap is related to inadequate preparation, the manager must determine if the problem is with the quality or delivery of training or with the employee’s understanding of the content. In some cases, repeated training may help. Employees may also receive targeted coaching to close performance gaps.

If performance problems cannot be resolved by confirming the employee’s understanding of expectations or by delivering additional training or support, then managers can attempt to identify other obstacles that stand in the way of the employee’s success. This is often referred to as counseling, although it should not be confused with professional counseling for behavioral or emotional problems. If employees require professional counseling, managers should refer them to human resources or to employee counseling services.

Counseling in performance management is simply a conversation in which the manager invites the employee to discuss why the employee has not been able to meet performance expectations. Sometimes the employee does not have the ability to meet the job’s requirements even with additional training, but there may be other reasons, such as:

- Lack of motivation.
- Weak work skills.
- Personal issues, such as problems with transportation or child care or language barriers and comprehension.



Some of these issues may be resolved through coaching, a degree of flexibility or creative problem solving.

For example, if the gap is related to lack of motivation, counseling can allow the manager to understand the employee's perspective while reinforcing the organization's expectations. Often, an apparent lack of motivation masks other problems that must be addressed in other ways. For example, a minority employee may seem unmotivated but reports feeling as if everyone expects him or her to fail.

If the gap is related to poor job skills, managers can create remedial programs. Especially for entry positions, new hires may not have basic job skills, such as punctuality, hygiene and respectful, courteous behavior to superiors and co-workers. If the employee is promising in other respects, it may be worth pairing the new hire with an experienced mentor, someone with whom the new hire can identify but who can provide practical feedback and advice in an ongoing manner.

If the gap is related to personal issues, managers may be able to direct the employee to employee assistance programs or participate in developing solutions that meet the organization's and the employee's needs.

If a gap has been identified, the performance should be reassessed within an agreed time frame—definitely before the next regular review if the organization follows an annual schedule.

Continuous feedback

Younger workers have shown a preference for receiving feedback continuously rather than at scheduled performance meetings. Feedback timed with observed behaviors is always more effective in rewarding or correcting the behavior. In addition, continuously delivered feedback also relieves some anxiety employees may feel about performance review meetings. They have a fairly accurate sense of how they are doing before they come to the meeting.

Reward or correct

The final stage of the performance management step is to act based on the outcomes. If the employee is now performing at the expected level, the manager delivers positive feedback, praise or whatever rewards are appropriate for the organization and the individual (and the individual's culture). Rewards can be training opportunities, recognition at annual meetings, certificates, celebratory lunches or bonuses.



Persistent failure to meet job or behavioral expectations leads to disciplinary processes and, possibly, termination after one or more formal, written warnings. The situation and the consequences must be clearly communicated to the employee, and the conversation should be documented. Best practices also include having a third-party witness at discipline or termination meetings.

✦ Topic 5: Guide Professional Development

As employees master the expectations of their current positions, both the manager and the employee begin to engage about the employee's future plans with the organization. This discussion and planning may take place during an annual performance review or separately. If performance review and development discussions take place at the same meeting, employees should be encouraged to think about this issue before the meeting and come prepared with ideas for skill development.

If the FM organization has established learning paths, employees can use these paths to structure their own career development plans. A learning path describes the training an employee must complete to satisfy the requirements of the employee's present job and to build qualifications for other positions.

During these discussions, managers should communicate with employees about the organization's future needs and encourage employees to learn more about other positions in the organization. They should also encourage employees to think about what they want their future to look like and to begin planning how to get that future, even if it may lie outside the organization.

A manager cannot and should not plan an employee's future, but an organization can require that an employee commit to lifelong learning and complete an individual development plan. The organization can assist career and professional development by providing tuition reimbursements but also through a variety of organizational experiences, such as:

- **Assessment centers.** Assessment centers can provide employees with in-depth appraisal of their strengths and weaknesses, which can then be used to create individual development plans.
- **Mentoring relationships.** In a mentoring relationship, an employee meets with a more experienced individual to whom the employee does not report to discuss ideas for professional development and gain advice and



perspective. Often the mentor holds the type of position the employee would like, but sometimes the mentor is simply someone who can offer sound advice or help the employee network. Some organizations recognize the value of mentoring by formalizing these relationships and giving mentors credit for their work. Sometimes mentors are not members of the employee's own organization but of the profession.

- **Cross-training.** In cross-training, selected employees receive training and experience in performing a job different from their own. This ensures that the organization has a supply of trained and ready employees to fill vacancies efficiently. It is also a particularly useful career development tool. The experience allows the employee to explore another job before applying for it.
- **Job rotation.** Job rotation is a process of moving employees among different jobs. It could be used for the organization's convenience or as a way to motivate employees through lateral moves when opportunities for promotion are limited. However, job rotation can also be an excellent professional development experience. As the employee works in different positions, he or she gains experience in the skills required for that position and a deeper understanding of the different perspectives within the organization and of the organization as a whole.
- **Projects and special assignments.** These can be opportunities to acquire experience and new knowledge and skills and to demonstrate competence. Some organizations require employees on a management track to undertake at least one special assignment each year and to participate in cross-functional committees or task forces.
- **Peer coaches.** Being a teacher leads to greater mastery and confidence, stronger communication skills and an enhanced position in the organization's social network.

Employees may also be encouraged to develop "life skills" that will make them stronger people and therefore stronger employees. Life skills could include basic financial survival skills, computer and social media literacy, stress management techniques, time management or retirement planning.

Employees can also assume more control over their own development by joining professional associations and seeking advanced credentials.

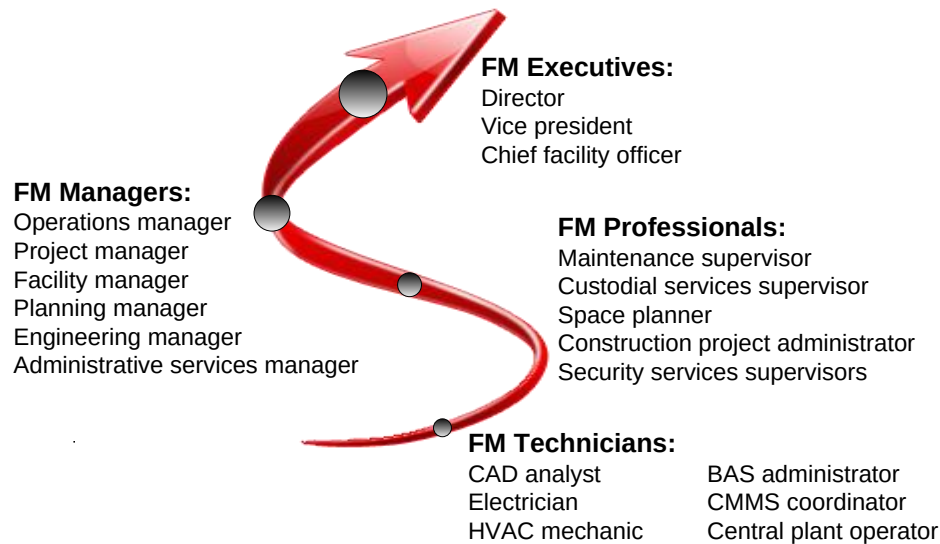


Facility managers and career development

Facility managers should be aware of the need to develop their own careers as well as those of their organizations. There are opportunities for advancement in FM executive management—e.g., FM director or chief infrastructure officer. There are also lateral opportunities in disciplines related to FM, such as project or planning manager.

Exhibit 3-25 illustrates a career framework for FM professionals prepared for IFMA. Career guidance can help those interested in moving from technician to executive and can also provide alternatives for those not interested in executive management.

Exhibit 3-25: FM Career Framework Model



Source: Robert Barnes, Yashesh Shah and Kathy Roper. *Facility Management Career Framework*. White paper prepared for IFMA. June 2010.

The 11 domains and associated job competencies defined in IFMA's global job task analysis provide development goals for FM professionals. IFMA's programs for certification as a Facility Management Professional (FMP), Certified Facility Manager (CFM) and Sustainability Facility Professional (SFP) provide one way to work toward those goals. Active membership in the organization provides opportunities for networking with other FM professionals.

Career development at School District #11

The following continuation of the School District #11 case study shows how facility manager Christine manages the development of one of her valued employees.



School District #11 Case Study (continued)

After a meeting at the district headquarters, one of the building managers told Christine about a custodian he had hired two years ago. The young woman was a member of a minority and a single mother. She had come to the position with few work skills, but she was very self-motivated. She took the learning path for her position very seriously and had already completed most of the assigned training. During her last performance review meeting, the building manager had asked what the young woman wanted to do next. Did she see herself staying in the school district? Did she like the mechanical aspects of her job? What about the dealing with building customers?

It became clear that the young woman was very interested in how the building systems worked. In fact, on her own, she would often ask if she could help in that area just so that she could become exposed to the work. The building manager thought she could eventually complete the training for certification in building system maintenance. It would be good for her but just as good for the organization. It could keep a talented employee inside the organization and benefit from her increased skills.

Christine pledged to provide training resources and to look for development opportunities for the young woman outside her own building.



Progress Check Questions

Directions: Read each question and respond in the space provided. Answers and page references follow the questions.

1. Describe at least two challenges related to employee development that facility managers must overcome.

2. A facility organization has a high turnover rate among newly hired managers. Since managers are hired only if they have experience, the organization does not provide new-hire training beyond organization policies and procedures. What might account for the high turnover rate? (Choose one.)

- ☐ a. The organization is not explaining its expectations adequately.
- ☐ b. Pay rates are not competitive.
- ☐ c. Management is recruiting in the wrong places.
- ☐ d. Applicants are misrepresenting their qualifications and experience.

3. A facility manager is told by senior management to eliminate advanced technical training for facility staff. Budgets must be cut, and senior management does not see the point in preparing facility staff to get jobs for other employers. Briefly, how could the facility manager respond to this?

4. Why must the process of employee development start with awareness of the organization's needs and values? (Choose all that apply.)

- ☐ a. To establish hiring and training budgets
- ☐ b. To create appropriate learning paths
- ☐ c. To ensure the correct ratio of managers to employees
- ☐ d. To establish accurate hiring profiles and job standards

5. Which of the following elements might be included in a formal job description? (Choose all that apply.)

- ☐ a. Starting salary
- ☐ b. Job responsibilities
- ☐ c. Physical requirements
- ☐ d. Training offered



6. Translate the following job competency for an assistant building manager into a performance standard.

Competency: Demonstrate customer focus with tenants, occupants and visitors.

Performance standard: _____

7. A facility manager creates the following performance objective for a building manager: “Will implement a recycling program to decrease the volume of waste for disposal.” What qualities of a SMART objective does this statement fulfill? (Check all that apply.)

- ☐ a. Specific
☐ b. Measurable
☐ c. Achievable
☐ d. Realistic
☐ e. Timely

8. List at least three factors that facility managers should consider when choosing training products for the facility organization.

9. A building manager is demonstrating to a new assistant manager how to produce a report from the building’s computerized maintenance management system (CMMS). The manager has performed the steps while simultaneously explaining the process as the assistant manager watched. What should happen next in this on-the-job training example? (Choose one.)

- ☐ a. Ask how much the assistant manager knows about CMMS products.
☐ b. Watch as the assistant manager produces a report.
☐ c. Provide manuals so that the assistant manager can learn details about the system.
☐ d. Leave the assistant manager alone to practice with the system for a while.



10. An FM organization has never had a written procedure for purchasing. New employees were simply shown the forms to use and told where to direct the completed form. In the course of introducing a new and more detailed purchasing process to a group of managers, the leader of the organization realizes that everyone has been using different standards for when to use the form and has interpreted the forms differently. What would best explain this? (Choose one.)

- ☐ a. Without a written procedure, on-the-job training has been inconsistent, varying among managers doing the training of new hires.
- ☐ b. New employees were never actually trained.
- ☐ c. The new process may not be accounting for the flexibility needed to complete the forms.
- ☐ d. This task should not have been assigned to new hires.

11. What is a learning path?

12. Which of the following best illustrates the developmental activity of mentoring?

- ☐ a. An assistant manager is assigned to different areas within the organization for two-month periods.
- ☐ b. An experienced technician is assigned to a newly hired technician to model performance and assist in introducing the new employee to the organization.
- ☐ c. A facility manager meets with a subordinate to discuss career opportunities within the facility organization.
- ☐ d. An assistant facility manager meets periodically with a manager in a different part of the facility organization to discuss ways to advance in the profession.



Progress check answers

1. Facility managers must ensure that employees develop the skills and knowledge needed to support the organization's strategic needs. They must also help employees meet their own career development needs to support retention. (p. 3-77)
2. a. Since employees are leaving fairly quickly, the organization has probably not been successful in describing the positions and what is expected of new managers. It is unlikely that a large number of applicants have been misrepresenting themselves. Pay rate may become an issue over time but not immediately. If there are enough applicants with the right qualifications, recruiting is probably not the problem. (p. 3-78)
3. The facility manager might point out that providing employees with the opportunities to increase their skills will increase the chances that employees will stay with the organization. It will also improve employee engagement and loyalty to the organization and enhance the organization's brand as an employer. (p. 3-79)
4. b, d. An awareness of organizational needs and values establishes what skills, knowledge and characteristics the organization needs in its employees. This will help define hiring profiles and performance standards. It will also help determine learning paths that will produce the necessary competencies. (p. 3-80)
5. b, c. A formal job description provides information about the responsibilities of a position and what is required to fulfill those duties, such as educational accomplishments or job-related physical abilities. Starting salary is not usually included in a job description, although in some industries a job grade might be indicated, which would refer to pay ranges. Nor does the job description include development plans or resources. (p. 3-84)
6. Develops positive relationships with tenants and occupants and maintains two-way communication channels. Anticipates that occupant and visitor needs are met and ensures timely response and resolution of issues. (p. 3-88)
7. b, c, d. The objective does not include specific criteria to assess successful implementation of the recycling program, such as a reduction in waste of 25 percent. The objective should also specify a timeline for fulfillment of the objective (e.g., before the end of Quarter 3). (p. 3-88)
8. Classroom or online training should be based on relevant and measurable learning objectives, accommodate different learning styles and include the means to validate the effectiveness of training and transfer of learning to the job. (p. 3-91)
9. b. The next step in the OJT model is to provide the opportunity for supervised practice. Only after supervised practice should the learner be allowed to practice independently. Without supervised practice, the learner could become frustrated or practice incorrectly, making it harder to learn the correct process. (p. 3-92)
10. a. The problem is most likely inconsistency in the way the managers have been taught, since training was based on OJT without a specific process as a guide. The managers could have been good communicators and the new managers could have been up to the task, but each individual developed his or her own approach to the task and communicated that idiosyncratic approach to the new managers. (p. 3-94)



11. A learning path specifies training that an employee must complete to satisfy the requirements of a job class and possibly advance to the next class. (p. 3-98)
12. d. Mentoring is a developmental activity in which an employee discusses advancement tactics with a more experienced individual to whom the employee does not report. Peer mentoring is similar but occurs between employees in the same or similar positions. Brief assignments designed to expose an employee to new parts of the job or organization are part of job rotation. Discussing career moves with one's manager is considered part of the career development discussion. (p. 3-98)



Chapter 5: Performance Appraisal

After completing this chapter, students will be able to:

- Describe the role of performance appraisal in the performance management process and the benefits it provides to the organization.
 - List reasons why organizations may have poor performance appraisal systems.
 - List criteria of effective appraisal systems.
 - Provide examples of the types of errors managers could make in appraising performance.
 - Distinguish among different types of appraisal methods, describing their advantages and disadvantages.
 - Describe 360-degree feedback and its benefits to the organization.
 - Describe the steps in an effective performance appraisal meeting.
-

✦ Topic 1: Overview

Performance appraisal is one part of performance management. It has three components: a formal evaluation of an employee's performance against job competencies or key performance indicators, a meeting in which that evaluation is communicated to the employee and, if necessary, a corrective action plan to address performance deficiencies. FM should work closely with HR in this area, since HR may have developed policies and defined specific tools to be used for appraisal. In the absence of an HR function, however, FM should be familiar with this area since they will need to implement an appraisal system that makes sense for the organization.

Performance appraisal may be one half of a regular performance planning meeting, with the other half focusing on a discussion about employee development desires and opportunities. Some organizations may conduct discussions of performance appraisal and career development in separate meetings.

Performance appraisal has two aspects:

- **Informal.** Managers deliver continuous feedback on performance as they observe it, providing praise or correction as needed. These feedback “moments” may occur quarterly, monthly, weekly or even daily if needed. Done correctly, informal appraisals preview what will be said during the



formal meeting. They should eliminate surprises. Although continuous feedback is an effective performance management tool, it should not take the place of a formal meeting.

- **Formal.** Managers and employees review the employee's performance in totality over some defined period. For new hires, this may be after three or six months, while for current employees the performance appraisal may occur annually or quarterly. Informal feedback is usually not documented or included in the employee's personnel file, but the performance appraisal is always included. The documented and filed performance appraisal serves as legally recognized and/or required support for employment decisions. For example, in many European countries, an organization cannot discharge an employee without documented poor performance ratings.

Benefits of performance appraisal

Both informal and formal performance appraisal are essential to an effective performance management system. Informal feedback keeps employees motivated and changes behavior more effectively by delivering the correction closer in time to the problematic action. The performance appraisal gives employees a clear sense of how their job performance has been viewed by managers or supervisors. This external assessment supports the decisions that employees have to make: what they have to change to improve the employer's evaluation of their work and whether they feel sufficiently valued by the organization to continue working there. The performance appraisal meeting provides an opportunity to focus, without distraction, on the employee, the job performance and the organization's needs and expectations.

Performance appraisals also benefit the organization. The strength of the organization increases overall as the performance of individual employees improves. The organization is able to identify its strongest and weakest employees—information that can support decisions regarding compensation, rewards, promotion and downsizing or layoffs. Vital organizational tactics, such as succession planning, rely on the data provided from performance appraisals. In succession planning, certain employees are selected and developed to fill key roles when they become vacant, ensuring little or no disruption in business processes. Performance appraisals also provide legally defensible support for personnel decisions, from providing opportunities to terminating employment.

Because of these benefits, many organizations require as policy a formal performance appraisal, duly documented by both employer and employee.



Why do so many organizations perform poorly when it comes to performance appraisal?

If performance appraisals benefit both the organization and the employee, why do so many managers dread doing them—to the point of avoiding them entirely? Why do they fill employees with dread as well? It could be that managers aren't taking the time to deliver feedback in the period before the meeting, so that the employee really has no idea what will be said in the meeting. There are several other possible reasons:

- **Conflict and emotion.** There is always the possibility that the manager and the employee will not agree on the quality of the employee's work and that the discussion can become emotional, uncomfortably so for the manager. The stakes for employees are high. A poor performance appraisal can mean the employee will be bringing home less money or have less opportunity or will have to be looking for another job. The easiest course becomes to avoid the conflict.
- **Connection with compensation.** Many organizations choose to separate compensation discussions from performance appraisals for a couple of reasons. First, the factors affecting compensation include much more than the quality of an employee's work. For example, the work itself may have a low value compared to other positions in the organization. Economic factors may also limit financial resources available for raises. Second, linking raises with good job performance can eventually stress an organization's labor budget. Pay increases are permanent and exponential in their effects. Some organizations opt to use only across-the-board cost-of-living increases and performance-linked bonuses.
- **Pro forma exercises.** When there are no particular performance issues to be discussed, managers may see the meeting as pointless. This, of course, overlooks the value of this meeting to engage and motivate employees—to express appreciation for efforts and to solicit reactions and ideas about improving operations.
- **Lack of confidence in performance measures and how they are used.** Employees must feel that the performance indicators used for the appraisal are accurate and fairly weighted according to importance to the organization. If there is little credibility in the measures, they may be seen as tools to accomplish unstated purposes—e.g., forcing someone into resigning, justifying a low or no pay increase.



Effective performance appraisal systems

Many of these problems can be addressed by ensuring that the facility organization's performance appraisal system meets certain criteria:

- **A positive and constructive focus** emphasizes that the purpose of the performance appraisal meeting is to recognize good job performance and ensure that it continues and to improve less satisfactory performance. The focus should be both on the past (examples of positive and negative performance) and on the future. For example, managers might ask employees if they lack any tools or support that can help them.
- **Progress toward long-term goals** is included in the performance discussion and assessment as well as performance on short-term goals. One of the criticisms of performance appraisal periods is that they encourage short-term actions that benefit the employee's review rather than long-range projects that benefit the organization. Including both types of performance objectives helps sharpen the focus of the appraisal.
- **Valid and specific key performance indicators** are shared with the employee from the beginning of the performance review cycle. This decreases the possibility that employees will feel surprised or ambushed by a manager's criticism.
- **Effective appraisal methods**—those that fit well with the tasks being appraised, the organization's culture and the manager's abilities—are used. Appraisal methods are discussed further in the next topic.
- **Training of evaluators** is essential in ensuring that the appraisal system is performed in a valid, reliable and objective manner. Different people may be involved in the appraisal process, and they must all be trained. The most common appraiser is the manager or supervisor, but some systems may include self-appraisal and/or ratings by fellow team members or customers. Multisource or 360-degree feedback can be a particular challenge for the manager in charge of the appraisal. (This approach to performance appraisal is discussed in the next topic.) The manager must ensure that the evaluators understand the criteria they must use and that they use it without bias. Exhibit 3-26 on the next page summarizes recommendations for evaluators as they rate employees.
- **Documentation** must be maintained for both legal and developmental reasons. Often the performance appraisal meeting begins with a review of key points and objectives from the previous meeting.



Exhibit 3-26: Effective Evaluation

- Is based on performance standards, not the evaluator's personal standards or the strengths/weaknesses of other employees.
- Applies the same standards to each employee performing the same job.
- Considers the totality of the employee's performance—not only what happened most recently and both the positives and negatives.
- Is based on sufficient and representative examples of performance.
- Focuses on aspects of performance that can be changed rather than personal characteristics or traits that cannot be changed.

✦ Topic 2: Performance Appraisal Methods

Often, the performance appraisal system used in the facility organization may have been selected for the entire organization. The facility manager must understand the method's features, requirements and limitations and must also be prepared to argue for any changes that may be necessary to make the appraisal system more effective for the FM organization.

The requirements and limitations of a performance appraisal system could include:

- Conflicts with the FM organization's values. For example, it may not reward qualities considered important within the FM culture.
- Unrealistic time demands. The amount of preparation and work the method requires of both the manager and the employee may make it impractical in the FM setting.

Exhibit 3-27 on the following pages briefly describes commonly used performance appraisal methods. Note that some of these methods may be used in combination. Examples for the position of a building automation system (BAS) technician are included.

360-degree feedback

The 360-degree feedback system merits its own discussion here. It is not parallel to the previously discussed methods. It may actually employ some of them. It is more about the sources of feedback used in the performance appraisal. In 360-degree feedback, an employee's performance is evaluated by those above and below and lateral to the employee in the organization's hierarchy and by "customers" outside the organization. (In the School District #11 example, 360-degree feedback could be sought from school officials and teachers and even students.)



Exhibit 3-27: Performance Appraisal Methods (continued on next page)

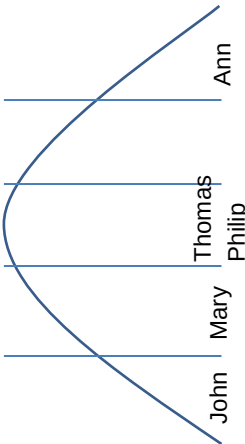
Method	Examples	Description
Category rating	Graphic rating scales <i>Example:</i> Responds to emergency and routine calls to restore system operation and control with minimal downtime. (Circle number.) 1 2 3 4 5	The evaluator is presented with a list of job responsibilities and must score the employee's effectiveness for each using ratings categories (e.g., outstanding, average, poor). If a checklist is used, the evaluator places a check next to a statement that accurately describes the employee. Items can be weighted. The tool is tabulated by someone other than the evaluator.
	Checklists <i>Example:</i> Promotes, builds and maintains good relations with tenants. Yes No	
Comparative	Ranking <i>Example:</i> 1. John 2. Mary 3. Thomas 4. Philip 5. Ann	Comparative methods assess performance by comparing employees to other employees in the same position. - A ranking tool asks a manager to rank all the employees in that position, considering their performance as a whole. The method also does not quantify the difference in performance that may exist between the employees. - A forced distribution tool requires that all employees in a unit be plotted on a bell-shaped curve according to performance level. The shape of the distribution curve can be adjusted to reflect an experienced, tenured group of employees. Forced distribution is not a substitute for individual performance reviews but can be used with them to characterize performance in an entire unit.
	Forced distribution <i>Example:</i> 	



Exhibit 3-27: Performance Appraisal Methods (continued on next page)

Method	Examples	Description
Behavioral/objective	Behavioral scales <i>Example:</i> Recommends equipment and systems operation/maintenance to improve energy efficiency, occupant comfort and reliability. • Good: Is current with technology and best practices and can make business cases for proposals. • Above average: Is current with technology and best practices and can make well-reasoned recommendations. • Average: Has some familiarity with new equipment and operating practices. • Below average: Is familiar only with current equipment and system performance. • Poor: Has no familiarity with trends in energy efficiency and indoor comfort factors. Management by objectives (MBO) <i>Example:</i> Objective: Thomas will strengthen relationships with tenants. Assessment: Thomas has met with each tenant and developed methods for maintaining communication and feedback on his performance.	Behavioral scales, such as behaviorally anchored rating scales (BARS), translate each task into specific behaviors that reflect a range of effectiveness, from exceptional to unsatisfactory. The manager then chooses the behavior that best characterizes the employee's performance. Management by objectives is both a developmental and appraisal tool. The employee and the manager develop and agree on a set of performance objectives for the coming period. It is critical that MBO metrics capture both quantity and quality—that quality of performance is not sacrificed to achieve a certain numerical goal.



Exhibit 3-27: Performance Appraisal Methods (concluded)

Method	Examples	Description
Narrative	Essay <i>Example:</i> In reviewing Tom's performance, I will focus on his technical expertise, ability to work well with occupants and his problem-solving abilities. Tom makes efforts to stay current with building technology on his own time... Critical incident <i>Example:</i> Received tenant complaint that Ann has been unresponsive to repeated requests to adjust lighting schedules.	In narrative appraisal systems, the manager describes the employee's performance in writing. In the essay method, for example, the manager writes a brief description of the employee's performance under several categories. The success of this method depends on the manager's ease in writing. In the critical incident method, a manager documents throughout the performance period good and bad examples of the employee's performance as they occur. This allows the manager to use specific examples to support the employee's ratings. It is, however, time-consuming and time-sensitive. The manager has to capture the incident in writing before details are forgotten. The critical incident method can be combined with other methods, such as graphic rating systems.

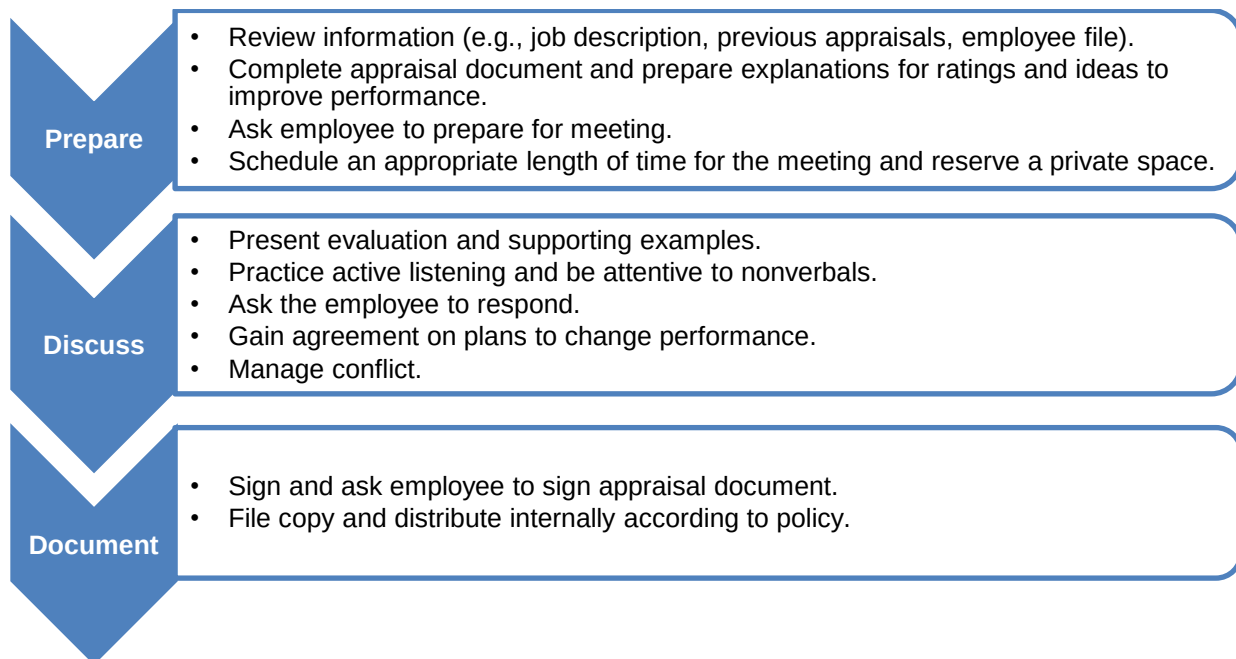


✦ Topic 3: Conducting a Performance Appraisal Meeting

A meeting is not required for performance appraisal, but it is recommended. A face-to-face or virtual meeting (by phone or Internet chat) can help ensure that the employee has a chance to ask questions, provide explanations or alternative perceptions and understand the evaluation. It can help prevent a poor appraisal from turning into litigation as an angry employee charges the employer with discrimination or unfair and capricious behavior.

The basic model for an effective performance appraisal meeting is shown in Exhibit 3-28, and the steps are discussed in this topic.

Exhibit 3-28: Conducting an Effective Performance Appraisal Meeting



Prepare

One of the most common causes for ineffective performance appraisal meetings—and a leading reason why employees may “check out” of the process—is lack of preparation. Both the manager and the employee must prepare for this discussion.

The manager prepares by:

- Consulting existing resources, such as job descriptions, compliments or complaints in the employee’s file, descriptions of critical incidents or notes the manager has made and the previous period’s appraisal record.
- Gathering other perspectives on the employee’s performance from peers or customers.



- Completing the appraisal document according to organizational policies. Although they may not be included in the document that is filed, the manager should annotate this document with examples that support the assessment (e.g., a letter from a satisfied tenant, a story about a good response to a building issue).
- Developing alternative ideas to improve performance.
- Rehearsing the meeting mentally. This may involve anticipating employee reactions and planning responses.
- Reserving a comfortable, distraction-free and private setting for the meeting.
- Discussing with the employee the purpose of the meeting and how the employee can prepare for it. The employee should receive a copy of the previous period's appraisal and/or the job description.

The employee prepares by:

- Reviewing the previous appraisal document and/or job description.
- Self-assessing performance during the period. The manager can provide the employee with a guide to help the employee accomplish this. What did the employee accomplish during this period? This might include output (e.g., preventive maintenance completion rates), special projects or participation in training, task forces or committees. How would the employee rate his or her performance? Why? What could the employee do to improve this performance? What could the employee change? What could the organization change? In organizations with computerized maintenance management systems, employees have the opportunity to create "journals" of their past job tasks, activities, productivity and quality levels.
- Developing ideas for future skill development if career guidance is included in this meeting.

Discuss

The output of the discussion should be clarity and agreement. The employee should understand why the performance was appraised as it was, and there should be a clear plan in place to improve the performance.

"Discuss" underestimates the possible drama that may ensue and the communication and interpersonal skills managers need to apply to make the meeting satisfying for both the manager and the employee. The employee may accuse the manager of unfairness, and the manager must be prepared to support any assessment with examples and proof. Conflicts may arise from different perceptions of the employee's and the manager's performance, and the differences must be objectively discussed. Emotions may have to be recognized, acknowledged and managed.



The *Communication* competency covers essential skills that can support managers in a performance appraisal meeting, including:

- **Awareness of nonverbal or physical signals** from the employee that may indicate feelings that the employee is talking about. The manager should also be aware of the nonverbal messages that he or she is sending. Are they neutral or positive or negative? Do they match the verbal message? Sometimes managers can send one message physically while expressing a completely different message in words.
- **Active listening** techniques to engage and encourage the employee to speak more. These could be open-ended questions (that can't be answered with a yes, no or simple fact) or physical gestures such as nodding.
- **Awareness of cross-cultural communication differences** that can distort meanings. For example, in some cultures avoiding eye contact is a sign of respect, not avoidance or dishonesty. In some cultures, managers may need to be less direct and do more suggesting and less telling.

Exhibit 3-29 lists some general tips to follow during the meeting itself.

Exhibit 3-29: Appraisal Meeting Tips

- Choose an appropriate environment, free of distractions and disturbances.
- Aim for a balance of conversation. Don't dominate the conversation and do all the talking.
- Watch the tone. Don't lecture. Don't be condescending. Don't let comments become personal.
- Stay calm, patient and objective. Avoid arguing about positions.
- Know your position and explain it, but be open to counterarguments and evidence. Be open to being influenced, but remember that agreement is not required in the end.
- If possible, try to balance positives and negatives.
- Don't compare the employee to other employees or to yourself.

Document

It may or may not be organizational policy to secure an employee's signature on the appraisal document, and if an employee disagrees strongly with the appraisal, he or she may refuse to sign it. However, it is a good practice since it documents the completion of the process and provides legal protection against claims of discriminatory practices or unfair termination. In a more positive sense, having both the manager and the employee sign the document signals commitment to any corrective or developmental actions to be taken in the coming period.



Keeping a copy of the appraisal document is necessary for administrative and legal reasons but also because it reflects completion of an important part of the facility manager's responsibility to develop the organization's employees and ensure their performance. It also becomes the basis for the planning, feedback and appraisal in the coming performance period.

✦ Topic 4: Performance Appraisal Case Study

One of the most challenging aspects of developing FM organization performance is adapting to the different levels of performance facility managers will see. For high performers, managers need to find ways to support and continue the performance and to keep the employee engaged in his or her work. For medium and low performers, managers need to find ways to raise performance levels.

The case study of School District #11 shows how performance appraisal methods and meetings are used to manage this challenge.

School District #11 Case Study (continued)

Christine's approach to performance appraisal

Christine uses an MBO system for performance appraisal because she likes the developmental aspects of that option. However, for the building managers, assistant managers and district-level managers, she also uses 360-degree feedback. This helps because, although she is responsible for the appraisal, she is not in the best position to know how the building managers are interacting with the school staffs and customers. She knows their performance from a superior's perspective.

Christine also believes in continual feedback. She makes a practice of remarking on positive performance and discussing negative performance when the performance occurs, and she tells her managers to follow this practice as well. She believes that it motivates employees by providing immediate recognition and limits the impact of poor performance by correcting it as quickly as possible. It also tends to remove the emotion from performance issues. A performance problem is just that—a problem to be solved.

According to district policy, Christine must complete formal performance appraisals annually, unfortunately at the same time. It represents a significant investment of time. Today she has three meetings scheduled with district or building managers who represent the entire spectrum of performance. She conducts the meetings in her office. There are strict rules not to interrupt except for a real emergency, not just an office emergency.



Managing the high performer

Christine has always seen John as highly competent. John is also one of the most professional and respectful people she has ever met. Although he is quite knowledgeable and experienced, he never imposes that knowledge. In fact, he tends to deflect all conversation from himself. He is always asking questions about what people think and how they work. He loved engineering and kept up with technology on his own time because he enjoyed the content. Last year Christine was frankly puzzled in trying to come up with anything but a glowing review for John.

She began the meeting by reaffirming how valuable she felt John was to the organization and offering numerous examples of his contributions. He smiled and thanked her and said that he liked his job. Christine responded that she was very committed to John liking his job. Was there anything that he had been thinking about that would increase his enjoyment? He assured her that, no, he was fine.

So Christine took the direct approach and asked, “John, what do you think of the way we do things here? You’ve been here longer than me. I really would appreciate your sense of where we’re strong and where we need to improve.” After some verbal dancing, Christine and John finally engaged in a very interesting conversation about the district. It turned out that John shared Christine’s concern about the changing demographics in the district. He was personally religious and committed to social justice issues. He would like to find a way to make a difference with his job, not just to make the buildings’ systems work better but the buildings’ people as well.

From this meeting, John and Christine planned a mentoring program that John would take the lead in developing. The goal would be to provide youth and chronically unemployed people with apprenticeships that could teach them basic job skills. John thought they could perhaps engage the district’s employers as well.

John received another stellar performance appraisal. Christine was feeling okay about her job.

Managing an average performer

Christine had seen Ned before in a hundred other employees who could perform their responsibilities adequately but had fallen into a comfortable routine. It was easier to do things the same old way. He would work on some objectives but not all. He was not keeping up with the field. Feedback from school staff and peers was that Ned was competent. They could work with him.

This year Christine decided that she would focus on re-engaging Ned in his profession. She would propose that he apply for advanced facility management certification. She would also expect him to complete all scheduled preventive maintenance work and participate in a building operations practices task force.



In their meeting, Ned seemed very comfortable. Christine asked Ned for his thoughts about this year. His assessment was very accurate, but he seemed all right with his limited accomplishments. As Christine began to explain her objectives for Ned, he became quieter and sat straighter in his chair. He fidgeted with the papers in front of him. Christine asked, "Ned, how do you feel about what I'm proposing?" He sighed a little and then replied that this is Christine's district and he would do whatever she told him to do. "But what do you think about what I'm proposing, Ned? What would you have to do to improve the scheduled work?"

Through persistent questioning, Christine did succeed in getting Ned to join the conversation. She asked him about his training and what he thought of it. Did he have any thoughts about how the district should approach sustainable operations? Had he read the article about redesigning classroom buildings in response to school violence? Could they make any of these changes in District #11? Should they?

By the end, Christine and Ned had agreed on the following objectives for the coming year:

- Ned's building would finish 100 percent of all maintenance work. It was a stretch, but it was possible if Ned kept on top of the staff and scheduling issues.
- Ned would begin attending IFMA chapter meetings, and report to the staff at three of the organization's monthly morning staff meetings.
- He would participate in one district-level task force.
- He would meet with John to discuss the mentorship program and develop ways to engage staff support for the program.

It was a tiring meeting for both of them.

Managing the poor performer

Maureen is the district's manager in charge of purchasing. She has been with the district for five years, three years longer than Christine. Her review last year was mixed. Christine acknowledged that Maureen did a good job of managing this area of the facility budget, and there were few problems with the billing process. The required audit had mentioned the quality of the department's records. However, Christine was less happy with the way Maureen managed the procurement system. Building managers and school staffs were not always happy with the quality of supplies. Turnover was also high in Maureen's department. Exit interviews with departing staff identified Maureen's dictatorial attitude and temper as contributing factors. Last year Maureen had agreed to meet with building managers and school staff to review issues and develop a new inclusive procurement process. She also agreed to retake the district's training on supervisory skills, communication and leadership.

During the year Christine kept tabs on Maureen's objectives. When she had not heard about progress on the procurement process, she asked about it. Maureen said she would address it soon. The training was completed. No one else had left, but that might have been more about the poor job market than changes in Maureen's performance. Errors have increased in the department, and Christine witnessed a heated exchange between Maureen and one of the clerks.



Christine began the review by asking for Maureen's assessment of her performance. Maureen said she thought she was one of the most effective managers in the district. She knew the policies and firmly enforced them, despite pressure from the schools. She was effective in negotiating discounts with vendors.

Christine acknowledged these statements but then focused on what seemed to her to be the main issues:

- They had agreed that Maureen would develop a new procurement process that involved building management and staff. She had not done this. Maureen protested that there was no need for change. This was just a philosophical difference between them.
- Subordinate reviews of Maureen's performance were poor. Her manner and approach to correcting employee performance had not changed at all. Maureen protested that she had completed the training. The subordinates were not good judges of her competence as a procurement manager.

Christine and Maureen debated their positions for a while. Christine remained calm and repeated that Maureen needed to deliver on the objectives they had set. Maureen became increasingly angry. Christine asked if there were any other issues that might be preventing Maureen from making these changes. Maureen asked if Christine was referring to what seemed to her the obvious cause for their problems: that Maureen was better qualified for Christine's job and should have been appointed to that position three years ago. Christine calmly encouraged Maureen to reapply when Christine's contract was up for renewal. Until then, she reported to Christine and was expected to perform the responsibilities in her job description, which included personnel supervision, teamwork and customer focus.

Maureen refused to agree with the idea of continuing the previous year's objectives and offered objectives based on her own sense of her job. Christine refused to accept this and explained that she would be writing a letter informing Maureen of issues with her performance. If these issues were not fixed within the next three months, there would not be another appraisal meeting next year.

This was her last interview of the day. Christine made a note to herself that next time she should end with John.



Progress Check Questions

Directions: Read each question and respond in the space provided. Answers and page references follow the questions.

1. Which of the following statements about performance appraisal is correct? (Choose one.)

- ☐ a. It is an alternative method of performance management.
- ☐ b. It involves only the manager responsible for evaluating performance.
- ☐ c. It involves, in part, a formal discussion of total job performance.
- ☐ d. It is another term for coaching.

2. List at least three benefits of effective performance appraisal systems.

3. Employees have been coming to appraisal meetings unprepared because they have already been told that there will not be raises this year. What mistake has the organization made? (Choose one.)

- ☐ a. The employees should not have been given this information.
- ☐ b. The meetings should have been cancelled.
- ☐ c. Appraisal meetings should not have been linked with communicating raises.
- ☐ d. Appraisal meetings should be postponed until employees have overcome their disappointment and anger about the raise situation.

4. List at least four criteria associated with effective performance appraisal systems.

5. A facility manager is disappointed with a technician's performance during the last emergency drill and lowers the technician's performance rating as a result. How is this evaluation ineffective? (Choose one.)

- ☐ a. It uses unclear standards.
- ☐ b. It places too much weight on the most recent event.
- ☐ c. The manager has let an overall negative impression of the employee color the whole appraisal.
- ☐ d. The manager is assessing the employee according to the manager's own standards.



For questions 6 to 9, match the appraisal method on the left with the appropriate description on the right.

Appraisal method	Description
_____ 6. Behaviorally anchored rating scale (BARS)	a. Employees are ranked on a bell curve.
_____ 7. Forced distribution	b. Managers use examples of performance they have observed to explain ratings.
_____ 8. Critical incident	c. Employees are rated according to how well they met agreed goals.
_____ 9. Management by objectives (MBO)	d. Levels of performance are represented by specific examples of job competency at work.

10. An organization that uses 360-degree feedback to appraise the performance of a tenant property recognizes that:

11. Provide an example of an activity that might take place in each of the steps in conducting an effective performance appraisal meeting.

Prepare	
Discuss	
Document	



Progress check answers

1. c. Performance appraisal can, and should, comprise both ongoing, continuous feedback and a formal meeting to discuss performance as a whole. (p. 3-107)
2. Benefits of appraisal systems include:
 - Improving employee performance and organizational strength.
 - Aligning opportunities and compensation with employee performance.
 - Supporting employees' decisions about careers and skills.
 - Legal defense for employment-related decisions. (p. 3-108)
3. c. The appraisal system should not have been linked with the issue of annual pay increases. This detracts from the performance improvement potential of appraisal meetings. (p. 3-109)
4. Effective performance appraisal systems:
 - Have a positive and constructive focus.
 - Incorporate long-range as well as short-term goals.
 - Use valid and specific performance objectives that are communicated in advance to employees.
 - Use appraisal methods that fit the work, job and manager's abilities.
 - Ensure that performance evaluators are trained.
 - Ensure proper documentation of performance discussions. (p. 3-110)
5. b. The appraisal error of recency occurs when a manager allows an event that occurred just before a performance appraisal to exert a disproportionate influence on the employee's performance as a whole. (p. 3-111)
6. d (p. 3-113)
7. a (p. 3-112)
8. b (p. 3-114)
9. c (p. 3-113)
10. An organization that uses 360-degree feedback to appraise the performance of a tenant property manager recognizes that feedback from multiple sources will provide a more complete picture of the property manager's effectiveness than review by the organization's senior management alone. (p. 3-111)
11. Prepare: Review existing documentation, complete appraisal document, communicate with employee.
Discuss: Present evaluation and supporting examples, be attentive to nonverbals, involve employee, manage conflict.
Document: Secure signatures if needed, retain copy, forward for distribution if needed. (p. 3-115)



Chapter 6: Managing for Diversity

After completing this chapter, students will be able to:

- Define diversity in the workplace.
 - List challenges and benefits associated with diverse workplaces.
 - Provide examples of strategies to create and maintain a diverse workplace.
-

✦ Topic 1: Workplace Diversity

Defining diversity

Workplace diversity can be defined in very narrow demographic terms—for example, race, gender and age—or in legalistic terms such as the concept of “protected classes” under antidiscrimination laws. For facility managers, however, workplace diversity is a much broader concept, a picture of the differences that fuel a dynamic and creative organization—diverse skills, knowledge, talents, experiences and perspectives that work against complacency and focus the organization on continuous improvement.

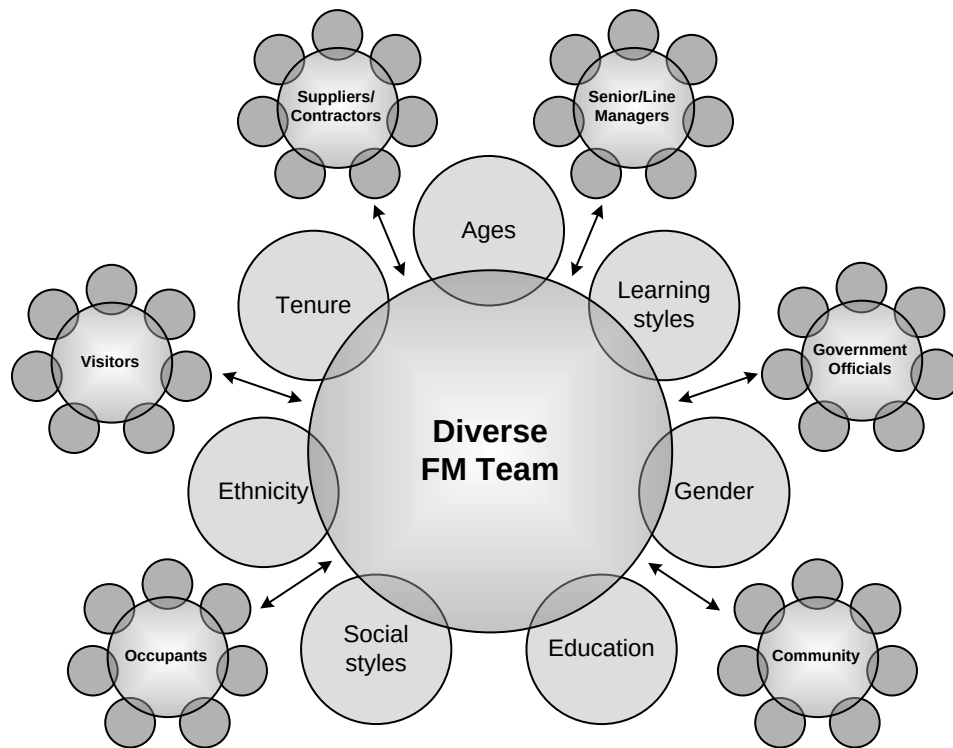
As Exhibit 3-30 on the next page shows, a diverse team can emerge from a number of differences, including ethnicity (or national origin or race), gender, age, economic status, talents (e.g., engineering, writing, social skills, math), education, status at work or in society (e.g., tenure, job position, job group), social and learning styles, social values and religious beliefs.

As the exhibit suggests, the chances for encounters between people who are different from oneself increase as one interacts not only with the FM team but with suppliers and their staff, occupants, visitors and government representatives.

Many of the components in the exhibit are self-evident, but two—learning style and social style—may require more description.

- **Learning style** refers to the way a person acquires and organizes new information. There are different models to describe differences in learning styles, and inventories based on specific models can be used to identify one’s learning style. One model focuses on the sensory aspects of learning, what sense people seem to use most when thinking—visual, auditory or tactile (also referred to as kinesthetic).



Exhibit 3-30: Components of Diverse Teams

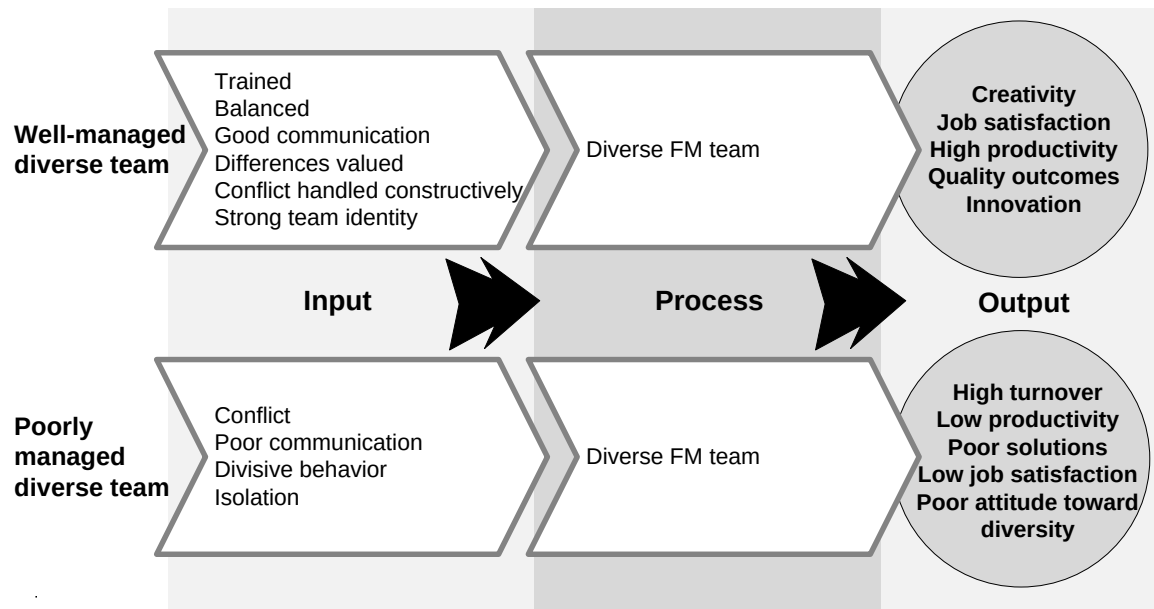
Another model focuses on cognitive preferences. Does a person tend to apply an existing rule to the present situation in deciding how to act? Or does a person consider the present situation and compare it to similar situations and create a new rule? Does a person suddenly leap to an intuitive conclusion or do they work toward the answer methodically, even physically experimenting as they work? There has been much debate among experts about how we learn, but it is enough for facility managers to appreciate that people do approach learning and problem solving in different ways and each way is legitimate.

- **Social style** refers to the way people interact. There are a number of models. Individuals may be analyzed by their desire for interaction (i.e., introverts vs. extroverts), the way they achieve their goals (e.g., drivers or dominators vs. relationship builders), the degree of emotion they exhibit, or whether they are cautious or impulsive and risk-taking. Facility managers will recognize many of these differences in their equally effective staff members.



Creating a diverse FM team can be seen as a facility process with inputs and outputs, as shown in Exhibit 3-31. The process can be performed well or poorly.

Exhibit 3-31: The Diversity Process



Source: Andre Sammartino, Janine O'Flynn and Stephen Nicholas. "Managing Diverse Work Teams: A Business Model for Diversity Management." Australian Center for International Business, 2002, www.ecom.unimelb.edu.au.

By ensuring the right input for diversity efforts, the facility manager ensures the right output: a cohesive, creative and quality-focused function.

Challenges and benefits of diversity

Managing a diverse staff may seem more trouble than it's worth. Communication may be more difficult—in a literal sense if staff members have different native languages but also in a figurative sense as each member processes the message in his or her own manner. Managers are often surprised to learn that what was heard is not what they thought they had said. There may be conflict as some team members quickly arrive at what they believe is an obvious conclusion, while others work methodically, testing the validity of each step in the answer. Insensitive statements will be made, consciously or unconsciously, and relationships will have to be repaired. Or, alternatively, staff members may feel so guarded about others' sensitivities that it is difficult to form team relationships.

Despite the challenges, diversity can benefit the function and the entire organization. A diverse facility management team can increase the team's ability to respond to the needs of equally diverse occupants and to assimilate new technologies and approaches into well-established processes and operations.



There are commonly recognized advantages to organizations from building and supporting staff diversity:

- **Quality solutions.** Because diverse teams can approach a problem from different perspectives and with different strengths, they tend to have a better understanding of the issues and sounder solutions.
- **Innovation.** Successful teams require a balance of experience and fresh ideas. Success may even thrive on the tension created between the familiar and the new. Because they have different strengths and different ways of looking at the world, diverse teams can challenge each other with new ideas and perspectives. Consider a team with age diversity. Younger team members may be more comfortable with and may propose solutions involving new technology, such as social media. Or a staff that is all well-tenured may be more inclined to repeat time-tested approaches until a newcomer describes an alternative.
- **Customer awareness.** The organizations and stakeholders that FM teams support are increasingly diverse. When diverse teams bring their own different experiences of life to the job—as woman, as parents, as minorities, as non-native speakers—occupants and stakeholders are more likely to find more sympathy and understanding in the FM organization. Diverse staff can understand the different environmental needs of creative marketers and experimenting scientists. FM staff who are working mothers can anticipate the effects of facility changes on similar occupants. Non-native speakers may be more able to understand communication issues with non-native contractors.
- **Organizational development.** With exposure to different perspectives, experiences and talents, individual team members increase their own abilities, and the organization grows more powerful, resourceful and flexible.

Did You Know?

Forbes magazine conducted a survey of 321 executives in charge of diversity programs for large global enterprises. The respondents were evenly split among the Americas, Asia-Pacific and Europe/Middle East/Africa. The major findings included the following:

- A majority agreed that a “diverse set of experiences, perspectives and backgrounds is crucial to innovation and the development of new ideas.”
- Given the competition for talent in a global economy, having a diverse and inclusive workforce is an essential part of organizations’ strategies to recruit, develop and retain talent.
- Responsibility for success of diversity programs lies with senior management.
- While progress has been made toward greater gender diversity, respondents were not satisfied with diversity achievements in areas such as disability and age.



The facility manager's role is to ensure that the function and the organization receive the benefits of diversity. The next topic discusses what a facility manager needs to do to develop, lead and sustain a diverse workforce. For more information about team roles and motivating team members, see the *Leadership and Strategy* competency.

Complying with local laws

Facility managers should be aware of local laws, regulations or programs that are aimed at increasing diversity in recruiting, hiring and promotion. However, they should also be aware of local mandates to hire indigenous people rather than expatriates or guest workers. Some countries, such as Saudi Arabia and the Cayman Islands, impose hiring guidelines designed to increase the hiring of local citizens as a way to control high unemployment rates.

✦ Topic 2: Strategies to Manage Diversity

Diversity is not created by simply hiring employees with different personalities and backgrounds and tossing them together. It requires intensive management attention to combine those separate components into a highly functioning team. The strategies to manage a more diverse facility management function involve:

- Managing the workforce in a manner that encourages diversity and removes impediments to the creation of a diverse workforce.
- Gaining awareness of oneself and those one manages to build a balanced team.
- Building team cohesion by communicating the value of diversity and reinforcing team identities.
- Supporting diversity by providing training.
- Recruiting with diversity in mind and working to retain team members who add to the unit's diversity.

Aligning policies and practices with diversity

In the IFMA global job task analysis, the second competency in the *Human Factors* competency area describes how a facility manager can encourage diversity by:

- Ensuring that hiring and job assignments are based on performance and organizational policies.
- Removing barriers to advancement that are not based on stated performance, experience or education requirements.
- Providing opportunities for career development in an equitable manner to all function members.

Diversity can thrive only in a function that is managed fairly and consistently.



Building balanced teams

Most people see their own tendencies and values not as alternatives in a range of options but as norms or standards against which all other positions are compared. So it is useful to see that there is actually a variety of ways to relate to people, learn new information and solve problems. Gaining awareness about differences and respecting the validity of differences can increase the respect team members have for each other.

This awareness is valuable for all team members, both managers and employees, since effective communication will depend on understanding how differences—in age, gender, culture, perspective or style—affect the way in which a message may be heard. For example, managers must understand that lack of the usual signs of enthusiasm may not mean lack of commitment to the job or the facility management team. It may simply result from a different culture or a more reserved nature. Analytical building technicians who have always preferred to solve problems independently will have to learn to maintain communication with their managers and teammates.

There are many personality and learning style assessments that can be used by facility managers to identify their own and their staff's learning and social styles. These are often useful tools in helping individuals learn how to tailor their communication or processes to the needs of people with diverse styles.

Building cohesion

A good way to overcome feelings of separateness or difference is to create a strong sense of unity or shared purpose or vision. In other words, a group of people with a strong team identity can overcome personal, acquired or work-related differences. It is the role of the facility manager to cultivate this cohesiveness.

A cohesive facility management function derives from:

- **Shared goals and common values.** Managers can articulate, clearly and often, the function's mission. They can reward both the group as a whole and individuals when their actions are aligned with the function's goals and values. Facility managers should ensure that all units within FM feel equal in their importance and contribution to the function's mission.
- **Mutual trust.** Managers can set a model for trust but can also discourage behaviors that violate trust among team members, such as gossiping or blaming or derogatory language. A good example of building cohesiveness in a gender-diverse work unit is intervening quickly and privately with a disrespectful team member who may be displaying offensive images in a work area or referring to co-workers in insulting terms. Offensive behaviors in the workplace are often excused as not being intended to be hurtful or



discriminatory. In fact, they can be seen as a sort of initiating ritual. And minority members can go along with the behavior, not wanting to be seen as separate or singled out for preferential protection by supervisors and managers. Yet the behavior is divisive, and it erodes trust.

- **Pride.** Elite combat groups are noted for their strong camaraderie, which can be attributed in part to their belief that they share an unusually high degree of skill and have been chosen for membership above less worthy soldiers. Facility managers can create a sense of function pride by setting high goals and by demanding professional appearance and behavior and continual improvement of work-related skills.
- **Sense of accomplishment.** Managers can celebrate function “victories” as results of group effort—meeting preventive maintenance goals through the combined efforts of staff members, responding to an emergency successfully, achieving high occupant satisfaction levels or completing a project on schedule and within budget.

Supporting diversity through training

The introduction of antidiscrimination and affirmative action programs around the world gave rise to organizational commitments to support diversity in the workplace, which in turn gave rise to a host of diversity training and cultural sensitivity programs.

Diversity training programs should clearly be evaluated before being implemented. Their tone and potential biases of facilitators should be assessed. The benefits of cultural understanding should be strongly emphasized in practical, work-related terms. For example, training on the values of an ethnic group should allow participants to apply this knowledge to their own jobs—e.g., to see how the importance of family in an employee’s culture can affect compensation forms, rewards or work/life programs. Training on differences in communication styles between men and women can help each gender identify conversation habits that cause irritation or, worse, misunderstanding.

An additional strategy for facility managers may be to focus on the skills that working in a diverse group requires identifying and managing conflict, communication skills (such as listening and negotiation), leadership, assertiveness and problem solving.

(Many of these skills are discussed in other competencies, such as *Leadership and Strategy* and *Communication*.)



Facility managers must also commit to providing resources to develop these skills. Training can be formal workshops or informal group debriefing after projects. Skills can also be supported through individual coaching or special assignments.

Recruitment and retention

Recruiting for diversity is about finding equally qualified or more qualified people who add something new to the current staff. Facility managers can promote diversity through the recruitment process by:

- Hiring employees who commit to being part of a diverse workplace.
- Setting diversity goals based on the organization's needs, identifying certain perspectives or strengths that could improve the function and the organization.
- Recruiting from groups that are underrepresented in the FM organization and supporting their professional advancement within the organization.
- Using innovative recruitment strategies. For example, a facility manager for a high tech company with younger employees may determine that the function needs to be able to anticipate their needs and think of solutions that meet those needs while balancing facility management's needs. So the facility manager begins looking for a younger technician with some practical experience but also interest in the kinds of technologies the company is developing.

Diversity recruitment must begin with a conscious goal of attracting more diverse applicants. Managers may have to use different methods from what has worked in the past. Current employees who represent the targeted group can be asked (and possibly rewarded) for referrals. Managers may network with groups where the desired job candidates are more likely to be found. Apprenticeship and work/study programs can be developed. Recruiting specific types of candidates may require additional budget. Advertising may have to reach a broader audience or run for longer periods of time. Interview methods may have to be altered to include a more diverse pool of interviewers who are free of conscious or unconscious bias. Interview guides may have to include questioning about different characteristics as well as the ability to work in a diverse workplace. Desirable candidates may require hiring incentives.

Once hired, employees who add to the function's diversity must be retained. Offering preferential treatment to retain employees is problematic since employees not receiving special treatment may become resentful and employees receiving that treatment may sense condescension. A better strategy is to keep the lines of communication open with the new employees and work to address issues as they arise. Minorities who see few other employees like themselves may need management support until they establish relationships with their co-workers. Supervisors and co-workers may need training in cultural awareness. Some issues



may be averted by implementing new policies for the entire function in an equitable manner, such as flexible schedules.

Case study: diversity and School District #11

The final section of the School District #11 case study focuses on the issue of creating and managing diverse teams.

School District #11 Case Study (continued)

Christine decided to create a facility project team to evaluate the unoccupied building, meet with community and business representatives and develop a proposal about managing the property—whether it can and should be reused for other purposes or sold. She included the following people in the four-person team:

- John is the building systems manager for the district and is the most technically knowledgeable person on the facility staff. He reports directly to Christine. He has been with the district for only two years and is not familiar with many members of the staff or most of the community. He is, however, excellent at analyzing building use and creating practical solutions.
- Moua is the youngest member of the team, a single mother from a disadvantaged background who started in a janitorial position and has become an assistant supervisor at one of the larger school buildings. She is a naturally friendly, engaging person. Students and teachers love her.
- Ned is a building manager and has the longest tenure with the district. He is very familiar with district processes and politics and an active member of the community. He is competent but comfortable where he is. He has not kept up with advances in building technology or use.
- Trevor is the techno-geek of the group, a young engineer who has been indispensable in setting up the facility's systems. He takes in everything and recognizes patterns and systems quickly. He is very introverted and quiet, but then suddenly he will present an elegant solution to a problem that others have been struggling with.

Christine sat in on one of the team's meetings and was amused and delighted with what she saw and heard. John was appointed the team leader since he was a senior manager but also because Christine had always been impressed with his communication skills. He is an excellent listener and knows how to draw everyone into a discussion and value their opinions, especially in their areas of strength. For example, he quickly realized that Ned was the ideal person to engage various community members in the visioning process for the building. He asked Moua to join Ned in meetings with the community and asked Ned to mentor her in conducting interviews and focus groups. However, as Ned and Moua reported on some of their meetings, it was clear that, because of her background, Moua had expanded the range of the community they were contacting. Both Ned and Moua were challenged and motivated by what they had learned. Trevor reported on the building condition and almost buried the group in information. The others had learned, though, how to wait and then ask for the main point of what seemed like disconnected data. Challenged to explain his thinking, Trevor summarized the building's limitations and possibilities. This led to a freewheeling discussion of what uses the team should recommend, with Ned injecting practical experience based on his history in the district and Moua adding truly imaginative possibilities based on her own experience as a student in the community. It was a very satisfying afternoon for Christine from many perspectives.



Progress Check Questions

Directions: Read each question and respond in the space provided. Answers and page references follow the questions.

1. List at least five factors that contribute to the diversity of an FM organization.

2. A manager is struggling to explain how a project will unfold to a building engineer who is more comfortable reading manuals and system schematics. What would probably be the most effective communication strategy here? (Choose one.)

- () a. Create a detailed flowchart of the project process.
- () b. Convene a meeting of all project members to present to the engineer.
- () c. Use a PowerPoint presentation.
- () d. Let the engineer pick up what he needs to know by sitting in on team meetings.

3. An individual's social style might include which of the following traits? (Choose all that apply.)

- () a. Behavior in a team meeting
- () b. Political beliefs
- () c. Approach to solving a problem
- () d. Willingness to discuss or show emotions

4. In the space provided below, list at least two examples each of the challenges and benefits that having a diverse facility organization present.

Challenges in a Diverse Organization	Benefits of a Diverse Organization

For questions 5 through 9, match the diversity strategy on the left with the appropriate example on the right.

Diversity strategy	Example
_____ 5. Align organizational policy and practices.	a. Work with community group to establish apprenticeship program.
_____ 6. Build a balanced team.	b. Severely reprimand an employee who has been lying about a team member.
_____ 7. Build cohesion.	c. Ensure that telecommuters are not penalized during performance appraisals.
_____ 8. Train.	d. Require all team members to take a course in communicating across cultures.
_____ 9. Recruit and retain for diversity.	e. Administer a learning style inventory to task force team members.



Progress check answers

1. Answers might include:
 - Ethnicity (or national origin or race).
 - Gender.
 - Age.
 - Economic status.
 - Talents (e.g., engineering, writing, social skills, math).
 - Education.
 - Status at work or in society (e.g., tenure, job position, job group).
 - Social and learning styles.
 - Social values.
 - Religious beliefs. (p. 3-125)
2. a. The engineer probably understands through abstract visualizations of a concept. This can be done most efficiently through a flowchart. Social or verbal expressions of the information will probably not work and may frustrate the engineer. (p. 3-125)
3. a and d. Social styles relate to the way people interact: to how they behave in social groups such as meetings and the way they feel about showing or expressing their emotions to others. (p. 3-126)
4. Challenges in a diverse organization include communication, conflicts of style, insensitive statements and behavior and inhibiting sensitivity to differences. Benefits include speed and quality of decisions, innovation, awareness of customers and a more powerful and flexible organization. (p. 3-127)
5. c (p. 3-129)
6. e (p. 3-130)
7. b (p. 3-130)
8. d (p. 3-131)
9. a (p. 3-132)

Next Steps

You have completed this competency of the IFMA Facility Management Learning System. Next, check your understanding by completing the online competency-specific chapter quizzes and case study to help you identify any concepts that need additional study. Check your understanding another way by selecting the competency-specific eFlashcards, or visit the Resource Center to download printable flashcards.

Once you have completed the chapter quizzes, reviewed the eFlashcards, completed the case study and feel confident that you have mastered the information, you can advance to the next competency.

