

ProFMI™

PROFESSIONAL  
FACILITY MANAGEMENT  
INSTITUTE

ProFM™

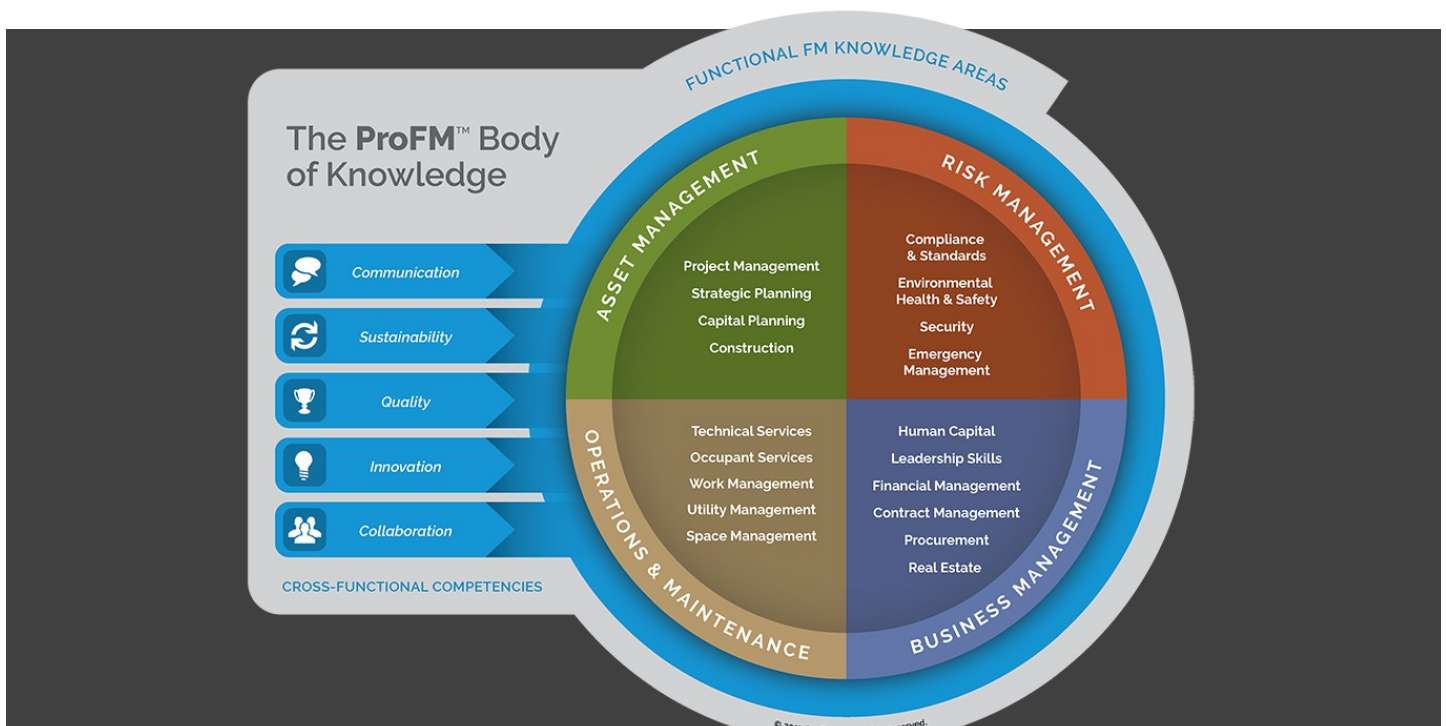
# BODY OF KNOWLEDGE



# Introduction to the ProFM™ Body of Knowledge (BOK)

Facility management is a diverse field that demands a lot of those who work in it. It aligns with the goals and strategies of an organization by supporting day-to-day service for individual people, their well-being, their productivity, and their quality of life. The profession is also rapidly evolving as it adapts to new technologies, globalization, and significant retirement gaps. As a result, employers expect facility professionals to demonstrate knowledge and skills that go beyond traditional facility management, expanding into strategic business skills. Facility managers are required to effectively apply knowledge and competencies to help drive organizational success.

In 2017, several FM organizations and individuals came together with a common goal to elevate the facility management profession and advance the careers of facility professionals, resulting in the creation of the Professional Facility Management Institute™ (ProFMI™). The ProFMI Commission was formed as a governance body to serve as an advisory committee for the ProFMI. This group of independent voluntary leaders representing the diversity of the FM profession included some of the most respected FM thought leaders in the world. The ProFMI Commission was tasked with defining the required knowledge and competencies of all facility managers to meet the expanding industry demands. Through an extensive research study involving thousands of facility management professionals from around the globe, the ProFM Body of Knowledge was developed. The ProFM model defines 19 functional FM knowledge areas and five cross-functional competencies required of today's facility professionals. The ProFM Body of Knowledge provides a road map for developing the capabilities needed to advance in facility management and improve effectiveness in the workplace.



## The Development of the ProFM Body of Knowledge (BOK)

This document is the product of an extensive program of research and validation of the ProFM BOK. More than 3,300 facility professionals from over 93 countries shared their experience and opinions on the knowledge, skills, and competencies expected of today's facility professionals. This research helped define and solidify the 19 functional knowledge areas of the four key domains and the five cross-functional competencies that FM leaders believe are required for success in the facility management profession.

### What is a Competency?

A competency is defined as a cluster of skills, knowledge, abilities, and personal traits that allow one to perform certain roles or tasks successfully. They can be categorized in different ways, including:

- **Technical**—This is the functional expertise (skills and knowledge) required in a particular role.
- **Managerial**—This is associated with planning, organizing, and directing work.
- **Cognitive**—This involves seeing patterns in data and events and logically making connections.
- **Interpersonal**—This is related to emotional intelligence, using an understanding of others to think clearly and perform professionally.

All of these competency traits are acquired and developed over time. They can be improved and honed through education and practice.

### Functional FM Knowledge Areas

Through the ProFM research study, the broad scope of processes, services, and activities were categorized into four key knowledge domains. These were identified as the core capability areas to accomplish the mission of FM:

- Asset management
- Risk management
- Business management
- Operations and maintenance

Each knowledge domain is broken into essential competencies needed to ensure the capabilities. Descriptions of activities and required behaviors are linked to each competency.

### Cross-Functional Competencies

Effective facility managers must acquire certain technical knowledge and develop many related skills and abilities. However, additional cross-functional competencies are required to facilitate the application of the knowledge and skills. These competencies are valuable without regard to level of experience, the types of FM disciplines managers are engaged in, the size and complexity of their facilities, or the types of organizations in which they work.

These “competency threads” apply to job-related behaviors and should be a key consideration when conducting any FM tasks:

- Communication
- Sustainability
- Quality
- Innovation
- Collaboration

This dual approach for FM success goes beyond the traditional definition of facility management to reflect all of the knowledge, skills, and behaviors required of today’s facility professionals. This success is dependent on not only what a facility manager knows but how that knowledge is applied.

## Organization of the ProFM BOK

The ProFM Body of Knowledge is organized by the five cross-functional competencies and 19 functional FM knowledge areas required of today’s facility professionals. For each element, the following information is provided:

- An overview of the domain area
- A definition of the competency or functional area within each domain
- Key concepts describing foundational knowledge for that area
- Proficiency indicators that identify the observable behaviors for measuring competence

# CROSS-FUNCTIONAL COMPETENCIES

There are five cross-functional competencies in the ProFM Body of Knowledge: *communication*, *sustainability*, *quality*, *innovation*, and *collaboration*. These competencies describe the behaviors, attributes, and underlying knowledge necessary for FM professionals to facilitate the application of core technical knowledge and skills.

# Communication

**Definition:** *Communication* is the process of conveying information and ideas. It involves the activities of effectively transferring thoughts and expressing ideas with others, listening and addressing the concerns of others, and creating an atmosphere in which timely and high-quality information flows among all stakeholders.

Communication is a thread that weaves itself through everything a facility manager knows, says, and does. Technical skills are not enough to ensure success for a facility manager. A fundamental part of the role is communicating with a wide variety of constituents. The ability to communicate is implicit in facility management. Communication is used to:

- Coordinate facility work by communicating clearly and completely what must be done, when, how, and by whom.
- Build support for proposals and create allies.
- Deliver service to varied stakeholders who may have different needs and expectations of FM.

Communication is a skill that a competent facility manager must have as well as a tool that the facility manager must use to support his or her leadership role in the organization. Facility professionals must communicate with stakeholders who have different communication needs, styles, levels of authority, cultural backgrounds, interests, and levels of expertise. Facility managers show respect and sensitivity to these differences and improve the effectiveness of their message by customizing their communications. Appreciating other people's perspectives creates opportunities to maintain and improve relationships, which in turn helps people be engaged and positive about working with FM. Well-planned and well-delivered communications can therefore have a strong influence on achieving project objectives. To this end, planning for this area includes collecting information on stakeholders' communication needs and requirements.

## Key Concepts:

- The communication model
- Good communication skills (e.g., active listening, choosing best medium, clear messaging)
- Formal/informal communication
- Appropriate communications for stakeholders
- Facility management's role in communications
- Creating a communication plan

**Communication Proficiency Indicators (Task Statements)**

- Effectively communicates with stakeholders, presenting appropriate levels of detail for the situation and refraining from presenting unneeded information.
- Creates a channel for open communication.
- Conveys information clearly and concisely and ensures that it is understood by the listener.
- Communicates FM's vision, strategy, and goals to senior leaders and FM staff.
- Creates a communication plan and distributes to all involved stakeholders.
- Defines and applies various modes of communication used within organizations.
- Chooses the best medium for communications.
- Develops and maintains a pattern of reciprocal exchanges of information.
- Solicits feedback from others.
- Listens actively to others' views and concerns.
- Identifies factors that can inhibit clear communication and seeks ways of overcoming them.
- Seeks further information to clarify ambiguity.
- Ensures that all stakeholders' feedback is heard and acknowledged.



# Sustainability

**Definition:** *Sustainability* embraces economic, social, and environmentally responsible business practices with the intent of bringing value for both an organization's shareholders and society. It is development in which the needs of the present are met without compromising the ability of future generations to meet their own needs.

In today's global marketplace, sustainable development is being embraced by organizations in every corner of the world. It isn't enough for a company to focus on maximizing its profits in any way it can; instead, the organization needs to consider how its actions and ethics impact the environment, safety, human rights, diversity, and philanthropy in positive or negative ways.

Sustainability is the goal of sustainable development. Facility managers are challenged to implement the principles of sustainability in almost all aspects of their work:

- They may be charged with reducing a facility's carbon footprint—the total greenhouse gas emissions from a facility.
- They may be concerned with the employment practices of vendors.
- They may be trying to shape occupant behavior to reduce wasted materials, water, and energy.
- They may be redesigning facility work processes to reduce the use of hazardous and environmentally unfriendly products.

Facility management should progress toward their organization's sustainability goals by designing and implementing interventions, transitions, and transformative strategies for positive environmental, economic, and social change.

## Key Concepts:

- Definition of sustainability for FM
- Corporate social responsibility (CSR)
- Key FM initiatives for sustainability
- Sustainability strategy
- Triple Bottom Line (TBL) approach
- Green building rating systems
- Sustainability scorecards
- Materiality matrix
- Measuring carbon footprint
- Equipment rating systems
- Environmental management systems (EMS)
- Waste management
- Global Reporting Initiative (GRI) reporting protocol
- Energy use intensity (EUI) index



**Sustainability Proficiency Indicators (Task Statements)**

- Embraces and supports a sustainability approach that meets the organization's culture, values, mission, and goals.
- Develops corporate social responsibility (CSR) strategies that reflect the organization's mission and values.
- Identifies and develops opportunities for FM and the organization to engage in sustainability initiatives.
- Advocates for the implementation of sustainability efforts within the FM organization.
- Serves as an influential voice for sustainability strategies and initiatives in FM.
- Helps staff and occupants understand the societal impact of business decisions and the role of the organization's sustainability activities in improving the facility and surrounding community.
- Utilizes the best practices of sustainability rating and performance reporting systems.
- Uses performance metrics to analyze data and information in order to understand and recommend sustainability solutions.

# Quality

**Definition:** *Quality* produces results or provides services that meet or exceed the organization's standards or requirements. It involves ensuring that one's own and others' work and information are complete and accurate and includes developing and executing strategies to improve work processes and efficiencies.

A commitment to quality is evident in all aspects of a facility manager's performance. Facility managers design project and operations and maintenance work processes and evaluate those processes to assure quality standards. A quality-minded facility manager is never satisfied with the status quo and is always curious about the potential for improvement. They use knowledge and skills related to identifying and analyzing quality problems and possible solutions. It also calls for systems thinking—understanding that a facility, a workplace, a process, or a team is composed of multiple pieces that interact and may be interdependent. Quality solutions must reflect this complexity.

Continuous improvement can serve as a driving force in every decision about facility design and operations. The basic principles of quality management and quality tools should be used by facility managers to improve facility projects and operations.

## Key Concepts:

- Definitions of quality and quality management
- Quality vs. grade
- Benefits of quality management system
- Plan, do, check, act (PDCA) model
- Quality management theory
- Total quality management (TQM) principles
- Quality standards and certifications
- Seven management tools
- Seven quality tools
- Steps to deliver quality FM

**Quality Proficiency Indicators (Task Statements)**

- Leads and champions process improvement initiatives.
- Uses the perspective of systems thinking to understand how the organization operates.
- Applies technical expertise in measurement and analysis.
- Uses organizational metrics and key performance indicators to inform business decisions.
- Selects, interprets, and evaluates output from quality tools to inform and monitor organizational solutions.
- Benchmarks FM initiatives and outcomes against industry standards.
- Identifies and resolves risks and early-stage problems in meeting customer and occupant needs.
- Applies data-driven knowledge and best practices.

# Collaboration

**Definition:** *Collaboration* involves working together to find ways to achieve multiple parties' goals simultaneously. It is both a method of resolving conflicts that already exist between parties and an intentional process that parties can decide to adopt as they begin working together.

Collaboration in the workplace is nothing new. However, it is becoming increasingly important for facility management, as facilities continue to include a wide range of new and interconnected systems that require buy-in and awareness for the building to perform as intended.

Facility professionals lead and manage teams of facility staff, contractors, and/or consultants and may lead and manage projects with even more diverse teams. They also often work with other business units and outside organizations. This provides key opportunities for facility managers to partner with multiple stakeholders to ensure project success.

Workplace collaboration means bringing varied talents together, combining different skills and knowledge. Different people working in collaboration as a team complement each other in various areas that can be used to the benefit of the organization.

Collaboration requires:

- A certain attitude—a belief that one's own ideas may not be the best solutions, that others have equally valid perceptions and ideas.
- An ability to listen and problem-solve.
- Skills in managing and focusing group activities.

As everyone contributes toward certain goals, collaboration with all stakeholders produces the best results and the highest levels of satisfaction among stakeholders.

## Key Concepts:

- Team building skills and model
- Elements of successful teams and partnerships
- Personality types/roles in teams
- Consensus-building tools (nominal group technique, Delphi technique, mind maps)
- Stakeholder collaboration
- Power/interest matrix
- Stakeholder prioritization

**Collaboration Proficiency Indicators (Task Statements)**

- Supports a team-oriented organizational culture.
- Creates and/or participates in project teams made up of FM and non-FM stakeholders.
- Fosters collaboration and open communication among stakeholders and team members.
- Builds engaged relationships with team members through trust, task-related support, and direct communication.
- Fosters a climate that is conducive to successful teams and partnerships.
- Encourages productive and respectful team discussions, soliciting opinions and feedback from each team member.
- Promotes the benefits of a diverse team.
- Establishes partnering agreements to promote collaboration.
- Facilitates agreement for collaborative efforts using consensus-building tools (e.g., brainstorming, nominal group technique, Delphi technique, mind maps).

# Innovation

**Definition:** *Innovation* is the introduction of a new idea, process, or product. In organizations, it is used to deliver increased value. In FM organizations, innovation involves discovering new ways to deliver better service with increased effectiveness and efficiency.

New and emerging technologies have helped facilities use automation to lower costs and improve customer service, to lower energy use, and to improve monitoring, performance reporting, and decision making. Facility managers can use innovation knowledge and skills to align innovation initiatives with the goals and objectives of the organization.

Innovation is not restricted to the use of technology. It is more accurate to see innovation as:

- A mindset that resists the status quo and is open to thoroughly new solutions. An innovative mind is able to free itself of preconceptions about how things are usually done or how an object or material is customarily used. Innovative minds see possible uses and solutions that others do not see.
- A personality that accepts the risk of failure and is not afraid of change.
- A process of creating the fertile ground that innovation requires, both in oneself and in one's teams.

## Key Concepts:

- Definition of innovation and its value to FM
- Innovation types
- Challenges that restrict innovation
- Organizational and personal requirements for innovation
- Innovation process model

## Innovation Proficiency Indicators (Task Statements)

- Fosters a culture of innovation.
- Demonstrates an understanding of the different types of innovation.
- Supports change initiatives to increase the effectiveness of FM systems and processes.
- Explores emerging trends and best practices of other organizations.
- Identifies opportunities for FM and the organization to engage in improvements through innovation.
- Supports diverse teams that bring diverse perspectives and experiences to innovation challenges.
- Leads a structured innovation process for teams to transition concepts into new practice.

# ASSET MANAGEMENT

## KNOWLEDGE DOMAIN

This domain covers essential knowledge and skills relating to asset management, which is the coordinated activity of an organization to realize value from assets. Its functional areas include *project management, strategic planning, capital planning, and construction*.

The primary goal of asset management is to enable an organization to achieve its goals in the most efficient way possible so that the organization's limited financial and human resources can be leveraged most effectively. Thus asset management needs to determine the optimum amount of assets to have, neither too few nor too many, as well as the right types of assets in the right places. The facility manager is charged with managing assets throughout the entire facility life cycle.



# Project Management

**Definition:** *Project management* is the use of skills, knowledge, and tools and techniques in overseeing all activities related to a project. The project manager's role is to ensure that the stated objectives of the project are achieved.

Project management is an ideal tool for achieving goals with unique requirements that can best be accomplished by temporary teams customized to the need. Therefore, project management is a fundamental skill for managing assets at all stages of their life cycles. Project management, rather than regular operations or maintenance, is the best tool for improving operations or maintenance processes, upgrading complex facility systems, implementing programs such as a recycling program, relocating staff and equipment, reallocating space due to churn, and renovating facilities or constructing new ones.

Facility managers' project roles involve management of a project through its distinct processes of initiating, planning, executing, and closure, while providing monitoring and controlling at all points to integrate the work of the project team and guide other stakeholders. Goals include:

- Using human and other resources effectively and efficiently.
- Meeting the project's objectives within scope, time, and cost constraints.
- Providing objective evidence of progress and results.
- Handing over required deliverables at the right quality and technical performance levels as proven by acceptance by the customer.

The overarching goal is to ensure that the interests of the organization and its customers are represented throughout the project life cycle.

## Key Concepts:

- Definition of projects versus operations
- Project triangle constraints and tradeoffs
- Project stakeholders and roles
- Project management process and milestones
- Inputs, processes, and outputs
- Project charter
- Programming
- Project scope
- Work breakdown structure (WBS)
- Project scheduling methods and tools
- Critical path method (CPM)
- Project budgeting
- Managing teams
- Project communication
- Variance analysis (schedule and budget)
- Quality control and metrics
- Project closeout processes

**Project Management Proficiency Indicators (Task Statements)**

- Develops and manages a project budget.
- Follows project management processes and procedures per the organization's preferred methodology.
- Works in integrated project teams to execute small, medium, and large projects.
- Balances project priorities based on achievement of the organization's vision, strategic direction, and long-term goals.
- Demonstrates an understanding of work roles and expectations of each team member within a project.
- Performs project programming to define project expectations.
- Establishes project baselines from which progress toward attainment of goals can be measured.
- Performs project scheduling (identifies and monitors the resources necessary to implement and maintain FM projects based on approved scope and deliverables).
- Operates project schedule with a global mindset and respect for cross-cultural differences.
- Manages and coordinates project execution using project management processes and procedures.
- Demonstrates ability to translate innovative ideas into actionable project tasks.
- Identifies and develops solutions for overcoming system limitations, leading to the successful completion of projects.
- Demonstrates knowledge of performance measurement concepts (e.g., SMART—specific, measurable, achievable, relevant, and time-bound).
- Uses key performance indicators (KPIs) to measure project performance to identify any variances and corrective actions.
- Develops communication plan and facilitates timely communications with project stakeholders to keep them engaged and informed.
- Establishes feedback systems to support continuous improvement of an organization's processes, practices, and results (outcomes).
- Evaluates project performance and outcomes.
- Performs project closeout functions.

## Strategic Planning

**Definition:** *Strategic planning* is an organization's process of gathering and analyzing internal and external information, setting goals based on that analysis, developing plans to accomplish those goals, and defining performance objectives that can be used to assess progress.

Facility management is no longer just about controlling operational and capital costs; it must focus now on how it can help the organization use the facility portion of its budget to create value, in the same way that human resources or research and development does. This is the role of facility strategic planning.

A strategy is a plan to create long-term value for customers and stakeholders and, in the case of for-profit businesses, future competitive advantage. Strategic planning is the process that helps create strategic alignment, a consistent relationship between the external environment (e.g., industry and market, government regulations), an organization's strategic goals, and the way the organization deploys its resources. It is the beginning of the strategic management process, which is the continuous process of planning, implementing, monitoring and measuring, and revising and improving strategies.

To be effective at facility strategic planning, a facility manager must be able to see the implications of the service customer's strategy on facility assets and plans and then to plan and deliver what is needed.

### Key Concepts:

- Definitions of strategy, strategic planning, strategic management
- Benefits of strategic planning
- Levels of planning: strategic, tactical, operational
- Strategic planning process model (e.g., ISO 41012)
- Facility strategic planning skills
- Facility strategic planning framework
- PESTLE tool
- Gap analysis process tools
- SWOT analysis
- Business cases
- Key principles of organizational design
- Organizational models and structures used by FM
- Benefits of effective policies and procedures
- Systems thinking
- Change management models
- Challenges of implementing change

**Strategic Planning Proficiency Indicators (Task Statements)**

- Develops and implements a strategic planning process.
- Aligns FM's strategic direction and long-term goals with the organization's overall business strategy and objectives.
- Gathers information and performs environmental scanning for strategic purposes.
- Develops an FM plan to achieve the strategic direction and goals of the organization.
- Aligns the facility's strategic requirements with the organization's requirements.
- Promotes the role of the FM function in achieving the organization's mission, vision, and goals.
- Participates in the organization's strategic planning by representing FM's perspective and expertise.
- Defines and communicates the FM and the organization's strategy, goals, and challenges.
- Defines key metrics (key performance indicators) to identify gaps and areas for improvement.
- Applies systems thinking perspective to make business decisions.
- Identifies and promotes opportunities for FM to engage in environmentally responsible business practices.
- Performs master planning.
- Demonstrates an understanding of the differences between an FM strategic plan and an implementation plan.

## Capital Planning

**Definition:** *Capital planning* is the integral part of the strategic planning process. It is the process of budgeting resources for the organization's long-term plans. It allocates funds dedicated for capital expenditures—such as obsolescence, operational excellence, and new facilities—to meet future organizational needs.

The decision to invest in a facility is usually made in the context of the company's strategic plan and capital budget development process. A capital budget covers the entire facility and serves as a means to evaluate its physical condition, pinpoint existing and anticipated needs, determine upkeep/modernization costs, and find ways to address these needs within financial limits. Abiding by these principles when developing a capital plan can help ensure that the facility manager's capital budget is more thorough, accurate, and meaningful.

Organizations need to determine the level of fixed assets that will give the organization's strategy the best chance to succeed. Too many fixed assets become a drain on profitability. They also require more funds to acquire and maintain, which will either drain cash holdings, dilute the investment of owners, or increase debt. However, too few fixed assets will limit opportunities and can endanger the organization's mission. A capital planning assessment includes a review of the condition of existing facilities and consideration of financial and life-cycle costs and strategic benefits. Good information on the current status of facilities helps facility managers justify retention, disposal, or alteration decisions. This evaluation will consider the degree to which existing facilities align with strategy—or could align, given changes.

### Key Concepts:

- Definition of capital planning
- Facilities asset management cycle
- Capital planning to project initiation process
- Facility condition assessment (FCA)
- Facility condition index (FCI)
- Portfolio review and analysis criteria
- Total cost of ownership (TCO)
- Life cycle assessment (LCA)
- Inventory analysis
- Life cycle cost analysis (LCCA)
- Financial discounting and interest
- Capital investment criteria
- Facility planning
- Feasibility analysis
- Due diligence analysis
- Developing a facility plan
- Elements of a business case
- Capital budget inputs and process

**Capital Planning Proficiency Indicators (Task Statements)**

- Performs a facility condition assessment (FCA) to set performance goals for facilities asset management and create long-term plan.
- Gathers data using facility condition index (FCI) performance indicator to create a baseline and benchmark current condition of facility.
- Uses a life cycle assessment (LCA) to estimate the environmental impacts of a material, product, or service through its entire life cycle.
- Calculates the basic costs required for a life cycle cost analysis (LCCA).
- Demonstrates knowledge of the difference between a life cycle assessment (LCA) and a life cycle cost analysis (LCCA).
- Calculates the total cost of ownership (TCO) and other economic analysis methods.
- Performs evidence-based decision-making process.
- Prepares a business case for capital projects, gathering information from other functional business units.
- Identifies, develops, and implements capital planning initiatives in accordance with the strategies of the facility master plan.

## Construction

**Definition:** *Construction project management* combines the responsibilities of a traditional project manager with the skills and expertise needed for construction and major renovation projects. The construction project manager's role is to ensure that the stated objectives of a project are achieved.

Facility managers won't likely be the project manager for a major construction project. In addition to this being a full-time job in itself, this role will likely be filled by a specialist in design and construction. However, facility managers always need to provide oversight to projects and ensure that they have proper project management. Oversight is needed at the earliest possible stages, because, as a construction project moves further toward completion, changes to plans become more costly and provide less utility or value for the money.

### Key Concepts:

- Design and construction process
- Project oversight
- Construction project charter
- FM role in construction projects
- Construction project team
- Budget and schedule estimates
- Commissioning process
- Project delivery systems
- Building information modeling (BIM)
- Construction contract types
- Budget planning
- Programming
- Design concepts and review processes
- Schematic design
- Architectural-engineering designs
- Construction documentation
- Permits and inspections
- Commissioning tasks
- Allowances
- Turnover and project closeout
- Postoccupancy evaluation (POE)



**Construction Proficiency Indicators (Task Statements)**

- Represents facility management's interests from a building's design, to the utilities that are installed, through commissioning and turnover.
- Ensures that building's operating systems are designed, installed, and programmed for optimal performance (leads commissioning, recommissioning, retro-commissioning processes).
- Demonstrates an understanding of construction project team roles and ensures that they are clearly defined.
- Provides FM leadership during design phase to ensure that facility management interests are considered and to influence the selection of building, equipment, and finishes.
- Performs regular site inspections during construction phases to check the build/installation quality.
- Reviews closeout documents, such as warranties and service contracts.
- Ensures attendance of maintenance staff at mechanical system training sessions offered by the equipment installers and suppliers and assesses their readiness to perform these tasks.
- Utilizes building information modeling (BIM) to provide life cycle data to support the needs of the facility.

# RISK MANAGEMENT

## KNOWLEDGE DOMAIN

This domain covers essential knowledge and skills relating to risk management, which is the process of identifying, quantifying, and managing the risks that an organization faces. Its functional areas include *compliance and standards, environmental health and safety, security, and emergency management*.

Organizations of all sizes need to identify, understand, and manage uncertainties or risks that are critical to achieving success in order to develop and thrive. Risk management should be strategic, focused on actual goals, reliable, and cost-effective. It is more than taking or avoiding risks. It is the development of a clear understanding of the risks that are important to the organization and managing them as the organization evolves and the operating environment (physical, environmental, financial, and social) changes through time.

## Compliance and Standards

**Definition:** *Compliance and standards* are common specifications, regulations, rules, guidelines, or behaviors used by organizations to demonstrate that they observe and comply with agreed criteria. They can help to ensure that process and leadership principles are consistent with good business practices.

When it comes to facilities, there are many technical, guidance, and management systems standards that help direct behavior and practices. Compliance and standards represent consensus views of laws, regulations, statutes, and guidelines that govern an organization's activities at international, regional, and local levels.

Facility management should lead a process of identifying applicable standards, regulations, and compliance items by:

- Reviewing organizational process assets (existing procedures, tools, and documentation) for currently applicable compliance items.
- Developing, hiring, or contracting with applicable persons or organizations to gain expertise in compliance items.
- Scanning for global, national, regional, community, and industry-specific compliance items (including laws and taxes) in each area of operation, differentiating between applicable versus nonapplicable compliance items.
- Differentiating between mandatory versus voluntary items.
- Updating records and procedures to add any new mandatory items.
- For voluntary items, doing a cost-benefit analysis to determine which compliance items are advantageous to pursue.
- Updating records and procedures to add new voluntary items that are advantageous to pursue.

### Key Concepts:

- Definition of compliance
- Scope of compliance in FM
- Importance and benefits of compliance
- Regulatory compliance (e.g., laws and statutes)
- Standard operating procedures (SOP)
- Definition of standards
- Types of standards impacting FM
- Benefits of standards
- FM compliance program model
- Effective ethics programs
- Ethical decision-making model

**Compliance and Standards Proficiency Indicators (Task Statements)**

- Maintains a current working knowledge of relevant corporate, life safety, environmental, financial, and government/regulatory compliance and standards.
- Ensures that FM projects, practices, and policies align and comply with laws and regulations.
- Demonstrates knowledge of and ability to manage compliance with recognized standards.
- Demonstrates knowledge and understanding of applicable building codes.
- Demonstrates knowledge of environmental building certification systems used by governments and industry.
- Develops and evaluates effectiveness of facility management policies to comply with all regulatory requirements.
- Ensures that required permits are issued for all modifications, personnel moves, renovations, and construction projects.
- Manages and oversees compliance with facility equipment inspection requirements.
- Documents standards, codes, and regulations to provide evidence of organization's compliance and communicate requirements to employees and service providers.
- Performs compliance audits.
- Responds to alleged violations of rules, regulations, policies, and procedures and oversees a system for uniform handling of such violations.

## Environmental Health & Safety

**Definition:** *Environmental health and safety (EHS)* is the process of creating safe and healthful workplaces and preventing or mitigating risks to occupants from workplace hazards and accidents. It involves ensuring compliance with environmental regulations and protection from environmental risks associated with emissions and waste.

Organizations that aspire to be better environmental stewards invest in strong environmental, health, and safety management. EHS management is consistent with facility management's mission to create and support a productive workplace and protect the tangible and intangible assets of the organization. This involves creating a systematic approach to complying with environmental regulations, managing waste, and reducing the company's carbon footprint. Successful EHS programs also include measures to address ergonomics, air quality, and other aspects of workplace safety that could affect the health and well-being of facility occupants.

Facility management gathers an understanding of what risks exist, what potential harm they can cause and to whom, and under what conditions the threat is most likely to occur. FM then examines the adequacy of current controls and identifies the need for further management.

### Key Concepts:

- Managing EHS risks
- Facility EHS plan
- Indoor environmental quality (IEQ)
- Effects of poor indoor air quality (IAQ) (e.g., discomfort, acute, chronic)
- Sick building syndrome (SBS)
- Building-related illness (BRI)
- Multiple chemical sensitivity (MCS)
- Sources of poor IAQ
- IAQ profiling process
- Key strategies to ensure good IAQ through design and construction
- O&M impact on IAQ
- Activities to improve IAQ (e.g., housekeeping, pest control, occupant relations)
- Facility lighting and occupant productivity and health
- Noise and vibration
- Occupational health hazards (e.g., ergonomics, stress)
- HAZMAT planning and mitigation tactics
- Hazardous waste disposal
- Hazardous building contaminants (e.g., asbestos, contaminated water, legionellosis, mold)
- Work activity accident protocols
- Fire risk management strategies
- Emergency management systems and plans
- Fire detection systems
- Fire suppression systems

**Environmental Health & Safety Proficiency Indicators (Task Statements)**

- Promotes and protects the occupants' quality of life.
- Identifies and has awareness of occupant health hazards (e.g., ergonomics, temperature, biological, radiation, asbestos, mold, lead, VOCs).
- Demonstrates knowledge of proper handling, storage, and disposal of hazardous, toxic, and biologic materials.
- Demonstrates knowledge of fire prevention systems in hazardous locations/operations, food preparation areas, and electrical transformers as well as unique design or antiquated fire alarm and suppression systems.
- Demonstrates knowledge of safety protection of occupants for internal and public access.
- Demonstrates knowledge of compliant personal protective equipment for workforce (employees and contractors).
- Designs and implements a workplace first-aid program that aims to minimize the outcome of accidents or exposures, including sufficient quantities of appropriate and readily accessible first-aid supplies and equipment.
- Develops plan and documents safety procedures for severe weather threats.
- Develops policies and requirements for safe motorized vehicle use.
- Demonstrates knowledge of and ability to manage adequate ventilation of workspaces.
- Creates, manages, and conducts fire and life safety and HAZMAT plans.
- Establishes procedures for environmental protection and occupational safety in the workplace.
- Administers and supports FM practices and policies that identify and/or mitigate EHS risk.
- Develops, standardizes, and maintains safety programs and procedures.
- Performs facility inspections, safety assessments, and on-site audits of work areas to ensure that safe work conditions exist and that safe work practices are being followed.
- Monitors procedures for compliance with EHS policies and procedures.
- Demonstrates knowledge of and ability to manage the documentation of occupant safety and health complaints and their resolution.

## Security

**Definition:** *Security* is the systematic approach to managing the protection, and the measures taken toward protection, of a facility, its operation, and profitability. It includes the physical and psychological safety of occupants and staff, the protection of organizational information, and the safeguarding of facility assets.

An important component of facility management is the administration of managed security services. Many organizations have a specialized team specifically responsible for security. Their focus is the protection of property, assets, and people. The role of the facility manager with regard to security is to partner with the internal security team, local officials, and/or security experts to:

- Assess security risks.
- Develop a mitigation plan.
- Implement the required changes to the facility and processes.
- Assume responsibility for the security of the FM systems.

The FM organization must plan and be prepared for any situation that may arise, realizing and hoping that their plans may never need to be used.

### Key Concepts:

- Scope and role of FM in managing security risks
- Potential security threats within a facility
- Facility security assessment checklist
- Physical security mitigation approaches
- Access control systems
- Security design and site considerations
- Utilizing RFID tags
- Preparing for and mitigating workplace violence
- Four Ps of managing workplace violence (planning, policies, preparation, prevention)
- Responding to active shooter threats
- After-action reviews
- Three levels of risk
- Cybersecurity elements
- Types of cyber attackers
- Cyber vulnerabilities
- Managing cybersecurity risks and checklist



**Security Proficiency Indicators (Task Statements)**

- Demonstrates knowledge of and ability to assess security risks and opportunities.
- Ensures proper planning, evaluation, application, design, installation, and construction of facility enhancements for all aspects of physical security.
- Performs a vulnerability assessment(s) to identify security weaknesses.
- Manages and oversees installations of building and site access controls (e.g., vehicles, card, biometrics, surveillance).
- Ensures security of building technology systems and services (e.g., cybersecurity, data protection, intellectual property protection).
- Documents control and security procedures.
- Develops plan and documents security procedures for workplace violence.
- Assists in security aspects of personnel hiring (e.g., background checks, screening, references).
- Demonstrates knowledge and awareness of FM technology systems.
- Assists with security investigations of personnel or building/site.
- Acts as liaison with police or local jurisdiction on security breaches or incidents.
- Works with security personnel as required.
- Communicates critical information about security risks and risk mitigation to FM employees.

# Emergency Management

**Definition:** *Emergency management* refers to facility management's preparation for and recovery from adverse occurrences (human-caused, technological, or natural events that constitute threats to organizational personnel, property, operations, or the environment). It may also be referred to as continuity planning, incident response, and disaster recovery.

Emergency management protects an organization by coordinating and integrating all activities necessary to build, sustain, and improve the capability to mitigate against, prepare for, respond to, and recover from threatened or actual natural disasters, acts of terrorism, or other human-caused disasters.

For emergency management, the facility manager's role is to:

- Ensure the safety of human beings first and then protect property and other assets.
- Provide expert advice to the emergency management team (and, in some cases, lead the team) based on knowledge of facility, equipment, and operations as well as occupants and their needs.
- Manage FM staff and resources to support business continuity and recovery.

By planning for an adverse occurrence, facility management can increase stakeholders' confidence in the ability of leadership to protect and restore the business and can reduce the impact of incidents by increasing the timeliness and quality of responses.

## Key Concepts:

- Definition of emergency management
- Role of FM in emergency management
- Emergency management model and process
- Common facility risks
- Emergency response plans (different types)
- Levels of emergency readiness
- Role of emergency manager
- Risk mitigation plans and activities
- Business continuity management
- Business impact analysis (BIA)
- Training and drills
- Incident response
- Emergency communication plans
- Evacuation and shelter-in-place procedures
- Incident recovery plan
- Incident response debriefing
- Damage assessment and documentation
- Incident recovery activities

**Emergency Management Proficiency Indicators (Task Statements)**

- Assesses risks (threats and opportunities).
- Develops facility management risk monitoring systems and processes.
- Develops, tests, and implements emergency management plans (e.g., before, during, after phases).
- Develops, tests, and implements business continuity plan for disaster recovery.
- Develops, tests, and trains personnel on emergency systems, plans, and procedures.
- Performs threat analysis (assesses impact).
- Performs damage assessment.
- Identifies roles and responsibilities in emergency management procedures, including communication channels.
- Performs and leads drills for emergency preparedness and response.
- Develops plan and procedures for vacating critical functions from primary site (including IT considerations and systems).
- Assists in implementation of data backup at off-site location (e.g., cold, warm, hot sites).
- Audits risk management activities and plans.
- Leads post-incident debriefs.

# BUSINESS MANAGEMENT

## KNOWLEDGE DOMAIN

This domain covers essential knowledge and skills relating to business management, which focuses on managing performance of all organizational activities to accomplish desired goals and objectives and achieve business results. Its functional areas include *human capital, leadership skills, financial management, procurement, contract management, and real estate*.

Facility managers are business managers. They are asked to do more with less, to engage the right resources, and lead those teams to create a collaborative workplace that runs in an efficient and effective manner. Managers must solve problems to achieve success by planning, organizing, leading, and controlling in a way that achieves objectives.

# Human Capital

**Definition:** *Human capital* refers to the knowledge, skills, and abilities possessed by individuals or groups of employees that can be used to create value for the individual, the organization, or both. For individuals, human capital can be invested to produce individual growth and career advancement. For organizations, harnessing the potential of the collective human capital in the organization can result in increased profitability, competitiveness, or customer service.

Facility management contributes directly to an organization's strategic success by supporting the productivity of facility occupants—all of those individuals using a facility. This includes employees, contractors, visitors, and customers. FM services create a more productive environment in which occupants can achieve their objectives. FM also uses performance management to support and increase the productivity of facility management staff.

Facility managers improve returns on human capital by focusing on both external and internal environments that affect job satisfaction and motivation. The external environment refers to the physical qualities of the workplace—qualities such as temperature and humidity, air quality, ergonomics, noise, the ability to adjust one's immediate environment to individual needs (e.g., to control lighting or airflow), and aesthetics. The internal environment refers to characteristics of individual workers that affect performance: needs that can be addressed through different motivation and rewards and task readiness or having the skills and knowledge and support to do one's job.

## Key Concepts:

- Impact of facilities on occupant productivity
- Environmental factors affecting occupant productivity
- Tactics to boost occupant satisfaction and productivity
- Measuring impact on productivity
- Role of human resources and facility management in managing human capital
- Staffing facility projects
- Employee life cycle
- Orientation vs. onboarding
- Employee engagement characteristics
- Goals of performance management systems
- Performance management model and process
- Utilizing motivation and rewards
- Diverse and inclusive workplaces
- Third-party work relationships

**Human Capital Proficiency Indicators (Task Statements)**

- Demonstrates ability to work with the facilities team to establish practices and procedures.
- Recommends and communicates policies and establishes practices and procedures for facility management.
- Demonstrates knowledge of the mission of the facilities' occupants and how the facilities enhance that mission.
- Understands facility management staffing requirements and develops strategies for sourcing and evaluating job candidates.
- Designs and oversees employee recruitment, motivation, and retention techniques and processes.
- Designs job descriptions that meet the organization's resource needs.
- Implements effective onboarding and orientation programs for new employees.
- Supervises, manages, coaches, and leads personnel as required.
- Drives a change management process—a structured approach to shifting/transitioning individuals, teams, and organizations from a current state to a desired future state.
- Builds engaged relationships with team members through trust, respect, and communication.
- Resolves or mediates conflicts in a respectful, appropriate manner.
- Supports an organizational culture that values diversity and promotes inclusion.
- Implements best practices for employee retention and job enrichment.
- Creates individual development plans in collaboration with employees.
- Demonstrates ability to develop and implement training programs for facilities staff and ancillary resources to support continuous learning opportunities.
- Implements recognition programs for sustainability efforts.
- Fosters collaboration and open communications.
- Ensures that communication messages are clear and understood by the recipient.

## Leadership Skills

**Definition:** *Leadership* refers to the ability to influence the actions of others. It often involves a process of recognizing issues or problems, developing a goal or desired end state, assembling the right team to accomplish the goal, supporting a collaborative team approach, and then gathering feedback to start the cycle again. Leadership skills are the traits exhibited by good leaders that help to guide and motivate a group of people to act toward the common goal.

As the strategic business environment has changed, and as facilities and how they are operated have changed, the role of the facility manager has also changed. With this change was borne the need for facility managers to be good leaders in order to be truly effective in their position.

Leadership involves inspiring others to manage themselves toward the shared goals the leader sets. Followers choose to follow a leader, so leadership is not the same as controlling or impelling by force of authority. It is rather a process of discovering what followers need and then giving them that customized support. It requires consistency and fairness because followers follow for the long term only if they trust and respect their leaders. Facility managers must be able to win management support for initiatives, build stakeholder teams around the goals for these plans, and then lead a facility management team to get the work done. This requires persuading others in the organization about the value of FM and its initiatives and building a network of organizational allies.

### Key Concepts:

- FM role in the organization
- Demonstrating the added value of FM (nine value dimensions)
- Theories of leadership
- Action-centered leadership model
- Leadership styles
- Aspects of organizational culture
- Elements of successful approach to cultural intelligence
- Ways leaders influence organizational culture
- Workplace conflict
- Conflict management
- Modes of conflict resolution
- Ways to minimize conflict
- Principled negotiation technique



**Leadership Skills Proficiency Indicators (Task Statements)**

- Demonstrates knowledge and ability to move from the operational (the who and when of things getting done) to the tactical (what we do) to the strategic (why we do what we do).
- Strategically allocates all forms of “capital” – human (people), physical (facilities), economic (money), and environmental (land and resources).
- Provides decision makers with better information about the total long-term costs and consequences of a particular course of action.
- Demonstrates knowledge and understanding of different leadership styles.
- Identifies opportunities to improve FM operations that better align with and support the strategic vision of the organization.
- Develops an organizational culture that defines the critical role of FM.
- Serves as an advocate for the organization to influence and ensure advancement of strategic goals and objectives.
- Builds credibility as an FM expert within and outside the organization.
- Acts as a mentor in the facility management team or organization.
- Applies an understanding of the needs, interests, issues, and bargaining position of all parties in negotiation agreements.
- Mediates or resolves escalated conflicts.

# Financial Management

**Definition:** *Financial management* refers to the process of planning for, organizing, controlling, and administering the funds used in a business. It involves efficient and effective money management to accomplish the objectives of the organization.

Facility managers need to understand how their department finances work—the big picture, how to stay on budget, and evaluate the financial strengths and weaknesses of alternative options. They use financial management principles and rules when they prepare and present operating or capital budgets (and individual project budgets), business cases that demonstrate value for the money, and financial forecasts or operating results in reports. Successfully presenting financial information to decision makers can be the difference between sufficient and insufficient funding for administration, maintenance, operations, and initiatives.

Having a basic understanding of finance can determine what facility managers can tackle on their own and when they need to approach a financial expert for assistance. A basic understanding of finance will help facility managers frame questions or needs in a way that makes sense to the analyst so he or she can do the right type of analysis and get the right data. Since finance professionals won't be experts at facility management, facility managers need to provide specifics on processes such as which programs are mandatory for compliance versus which are discretionary. In many cases, talking to finance professionals can prevent redundant work.

## Key Concepts:

- Facility management forecasting methods
- Financial forecasting tools
- Cash flow forecasting
- Budget types (e.g., top down, bottom up, rolling)
- Budget submission process and requirements
- Inputs required to create budgets
- Budget costs (e.g., fixed vs. variable, direct vs. indirect)
- Budget components
- Common budgeting methods
- Financial statements (e.g., balance sheet, income statement, statement of cash flows)
- Accrual accounting
- Depreciation methods
- Financial ratios
- Trend analysis
- Financial analysis of capital expenditures
- Return on investment (ROI)
- Investment value
- Internal rate of return (IRR)
- Payback period
- Managing against a budget
- Chargebacks
- Presenting financial results
- Financial risks (exchange rates, escalation rates, inflation)

**Financial Management Proficiency Indicators (Task Statements)**

- Demonstrates knowledge of budget submission requirements.
- Performs budget forecasting.
- Demonstrates ability to use LCCA in budget preparation.
- Demonstrates knowledge of historical budget records and costs and how to use in forecasting.
- Manages operating budget and produces required financial reports.
- Manages capital budgets.
- Demonstrates ability to quantify potential for cost savings and cost avoidance.
- Advocates for funding using economic analysis.
- Demonstrates ability to prioritize projects/programs based on funding levels.
- Demonstrates knowledge of invoice/expenditure approval processes.
- Demonstrates ability to recommend/conduct funding reallocation based on changing priorities.
- Conducts periodic financial reviews and produces required reports.
- Evaluates financial metrics to determine whether to repair or replace.
- Analyzes and interprets financial statements.
- Understands basic financial ratios (e.g., ROI, simple payback, net present value, IRR) and performs trends and ratio analysis.
- Presents and sells the FM budget to the organization's leadership.
- Demonstrates basic understanding and awareness of exchange rates.
- Demonstrates basic understanding and awareness of financial differences between private vs. public sectors.
- Demonstrates basic understanding and awareness of escalation rates.

# Procurement

**Definition:** *Procurement* is the activity of acquiring goods or services from suppliers.

Procurement is an essential part of a facility manager's job. A facility manager may be providing service to a parent organization (of which FM is one function) or to a client/customer organization (which purchases FM as a service). A facility manager's role in procurement for a parent organization starts with securing a budget to make purchases.

FM and the procurement department work together to bring goods or services into the organization: from needs identification, through research, cost comparison, and analysis, to selecting good, competent suppliers.

## Key Concepts:

- Definitions of procurement and sourcing
- Procurement goals
- Strategic procurement considerations and policies
- Proposal submission process types
- Procurement process/stages
- Bid evaluation criteria
- Bid evaluation procedures
- Roles of FM and procurement department
- Service level agreements (SLAs)
- Monitoring supplier performance
- Outsourcing advantages and disadvantages
- Outsourcing process
- Management contractor types
- Balanced scorecard

**Procurement Proficiency Indicators (Task Statements)**

- Demonstrates knowledge of rules and requirements for purchasing products and services.
- Assists in development of procurement strategy and policies.
- Establishes source selection criteria for evaluating and choosing resources (e.g., commodity and services).
- Develops requests for information (RFIs) and requests for proposal (RFPs).
- Participates in due diligence analysis.
- Provides technical support to the organization's procurement process.
- Identifies and interfaces with internal and external accountable resources (e.g., external vendors, internal or external IT systems owners).
- Obtains quotes and tenders from vendors and suppliers.
- Selects vendors and suppliers that allow for sustainable sourcing.
- Creates an effective statement of work (SOW) to ensure proper procurement of a product or service.
- Establishes performance criteria for evaluating contracted resources.

# Contract Management

**Definition:** *Contract management* involves the processes and procedures that organizations may implement to manage the negotiation, execution, performance, modification, and termination of contracts with various parties including vendors, contractors, and customers.

A contract is a legally binding agreement that obligates the seller to provide a specified product, service, or result and obligates the buyer to pay for it. It consists of an offer, an acceptance, and an exchange of money or something of value.

Facility managers will initiate and administer many contracts throughout their careers. Any time the organization requires basic supplies, the facility manager may be involved, if only to set the overarching contract with the vendor and monitor product cost, performance, and delivery time satisfaction.

A facility manager's job while contracting for services (outsourcing) requires more effort in managing the organization's relationship with the service supplier and staying abreast of service performance. For internal facility managers, depending on their department's size, managing and optimizing outside specialists' expertise may be a daily endeavor. For facility managers who work for property management or maintenance firms, their role's main focus is on supervising facility management services supplied to residential or commercial businesses.

## Key Concepts:

- Definitions of contract and contract management
- Types of contracting
- Contract pricing and rate methods
- Components of a contract
- Contract initiation process
- Contract negotiation skills
- Contract administration
- Cost control
- Change control
- Contract discrepancies
- Revision of contracts
- Terminating contracts
- Using computer-aided facilities management (CAFM) for contract management

**Contract Management Proficiency Indicators (Task Statements)**

- Demonstrates knowledge of different contract types (e.g., fixed-price, cost-reimbursable, time and materials).
- Demonstrates knowledge of basic contract terminology, including common terms and conditions.
- Identifies and interfaces with internal and external accountable resources (e.g., external vendors, internal or external IT systems owners).
- Performs contract negotiations on price, terms, and conditions.
- Coordinates legal review of pending contracts.
- Ensures compliance with company standards and contract terms and agreements.
- Governs and oversees contracts to ensure compliance and full value of the service or product being provided.
- Assesses technical requirements needed to ensure delivery and quality of services/products.
- Manages and coordinates contractor performance to ensure effective delivery of contracts.
- Creates change orders for project scope changes.
- Performs contract termination and closeout as needed.

## Real Estate

**Definition:** *Real estate management* is responsible for the location of the facility site, whether building or leasing, and all the steps necessary to acquire it.

Facility managers not only manage contracts, buildings, and structures; they also can perform property selection (requiring environmental and legal due diligence), acquisition, leasing, and disposal. All of this equates to real estate, which is historically the area most requiring augmentation in a facility manager's skill set.

The bigger and more diversified an organization becomes, the more a facility manager needs reliable, accurate information about its leases, buildings, costs, and separate tracts of real estate. Facility managers must become familiar with the details of managing real estate, which includes leasing (or buying) property for the organization's use or managing property that the organization leases out, acting as either tenant or landlord as circumstances dictate.

### Key Concepts:

- Buy vs. lease analysis
- Occupancy types
- Purchasing and leasing advantages
- Site selection and acquisition
- Property condition assessments (PCA)
- Managing and coordinating a build-out
- Property purchase checklist
- Types of leases
- Lease agreements (key sections)
- Leasing process
- Covenants
- Negotiating leases
- Green leases



**Real Estate Proficiency Indicators (Task Statements)**

- Demonstrates understanding of different types of leases (e.g., triple-net, full service, green).
- Demonstrates basic understanding of leasing standards.
- Performs buy versus lease analysis.
- Performs site selection and acquisition (due diligence).
- Works with property manager to oversee building performance to support occupant needs.
- Follows strategic approach to facilities portfolio and clearly communicates how real estate and facilities can support these missions.
- Identifies build-out specifications.

# OPERATIONS AND MAINTENANCE

## KNOWLEDGE DOMAIN

This domain covers essential knowledge and skills relating to operations and maintenance (O&M), which refers to all of the services, processes, workflows, and tools required to ensure that the built environment functions as designed and constructed. It encompasses all activities necessary for the assets (structure, systems and equipment, and occupants/users) to perform their intended functions. Its functional areas include *technical services*, *occupant services*, *work management*, *utility management*, and *space management*.

O&M activities each have a different focus. Operations refers to work practices required to operate the services and systems. Maintenance refers to the technical activities needed to keep the systems operational and in good working order. This domain is at the core of what facility managers do. While not needing to be technical experts in all building systems used, it is important for facility professionals to have an understanding of the requirements and capabilities of these systems and equipment to deliver optimal service to building occupants.

## Technical Services

**Definition:** *Technical services* are the activities related to the building site and structure, building systems and components, and managing, monitoring, and evaluating building system performance.

The services offered as part of operations and maintenance are generally divided into two categories: technical (or hard) and occupant (or soft). Technical services are generally related to the physical makeup of the building, and they cannot be removed.

A critical element of delivering superior technical services is proper management and oversight. Facility managers do not need to be experts in the technical aspects of each piece of equipment, but they do need to be well versed in operations, maintenance, engineering, training, and management. They are responsible for:

- Building site and structure.
- Building systems and components.
- Managing, monitoring, and evaluating building system performance.

### Key Concepts:

- Scope of O&M activities
- Role of FM with regard to technical services within O&M
- Building site and components
- Building site and structure condition assessment/evaluation
- Key features/behaviors of a sustainable site
- Building structure types
- Building structure below-grade elements
- Roofing systems
- Building envelope
- Building control systems (pneumatic, electro-pneumatic computerized, direct digital control)
- Plumbing systems
- Conveying systems
- Communication and cabling systems
- IT infrastructure systems
- Waste management and removal systems
- Interior systems
- Rent vs. purchase decisions for furnishings, fixtures, and equipment inventory
- Acquisition and installation of building systems
- Facilities audit process
- Measuring building performance; data collection methodology
- Key technical service building metrics
- Benchmarking process
- Technology and tools targeting increased efficiency

**Technical Services Proficiency Indicators (Task Statements)**

- Demonstrates an understanding of building systems and components (e.g., site/building, equipment, systems, infrastructure, grounds, and interior and exterior elements).
- Manages, monitors, and evaluates how well building systems perform.
- Oversees the acquisition, installation, and operation of building systems.
- Works with facilities team to determine and administer the allocation of building systems' resources.
- Manages the service/repair requests and maintenance and cleaning needs of building structures and permanent interior elements.
- Demonstrates knowledge of key building performance measures, where and how to read them, and reporting requirements.
- Demonstrates ability to perform benchmarking.
- Demonstrates knowledge of new technology and tools targeting increased efficiency of O&M.

## Occupant Services

**Definition:** *Occupant services* refers to how the facility management team is dedicated to keeping occupants content, safe, and productive.

The services offered as part of operations and maintenance are generally divided into two categories: technical (or hard) and occupant (or soft). Occupant services focus on making working in the facility more pleasant. Many building occupants do not realize that there is a whole facility management team dedicated to keeping them content, safe, and productive.

Facility management communicates with occupants on a regular basis regarding the level and type of services provided. Facility managers must investigate and learn about the occupants to provide the best services, they must be innovative in the solutions they offer, they must monitor the quality of the solutions offered, and, finally, they must police behavior to ensure that the environment is safe for all. This involves:

- Identifying the need or want for a service.
- Determining alignment with the organization's strategy and mission.
- Setting service levels and standards for performing the services.
- Determining reporting requirements.
- Administering the allocation of the services.
- Monitoring, inspecting, and evaluating the services.

### Key Concepts:

- FM role in occupant services
- Creating occupant surveys
- Setting service levels and standards for occupants
- Insourcing vs. outsourcing occupant services
- Food and beverage services
- Custodial services
- Fleet management
- Mail and copying/printing services
- Records management and document retention
- Telecommunications
- Conference room scheduling
- Audiovisual equipment services
- Occupant services future trends
- Occupant services quality control plan
- Work order priorities
- Technology and tools targeting increased efficiency
- Customer service standards and handling complaints
- Evaluating occupant services
- Performance measurements and benchmarking

**Occupant Services Proficiency Indicators (Task Statements)**

- Demonstrates an understanding of occupant services (e.g., food service, custodial, parking, fleet management, mail, copying/printing, child care, landscaping, telecommunications, security, pest control, health and fitness).
- Identifies initial and changing occupant needs.
- Works with facilities team to determine and administer the allocation of occupant services resources.
- Manages the workflow process for occupant services.
- Monitors, inspects, and evaluates occupant services.
- Demonstrates knowledge of key service performance measures and reporting requirements.
- Demonstrates ability to perform benchmarking.
- Sets service levels and standards for performing occupant services.
- Demonstrates knowledge of new technology and tools targeting increased efficiency of O&M.

# Work Management

**Definition:** *Work management* refers to the methods of coordinating daily, reactive, preventive, and replacement/repair facility management tasks. It represents the cost savings derived from a rigorous preventive maintenance schedule.

Work management is a key skill for a facility manager. It entails:

- Understanding what works today and applying it to future needs.
- Having an effective grasp of the current space and its configuration and the organization's changing needs.
- Staying current on internal and external change dynamics, whether economic, political, technological, or social. These cause changes to business—what work is done and how the work is done. In turn, these impact the building or space and how it must be configured for the organization to succeed.

Facility planning and management requires knowing how the people in the building work and what they will need to do it. Facility managers are responsible for ensuring that the facility operations—the systems, equipment, space, teams, technology, and more—run smoothly and efficiently. Through maintenance, repairs, service orders and requests, alterations and improvements, and capital projects, FM coordinates all work to properly support the facility and its occupants' needs.

## Key Concepts:

- Definitions of work management and occupant needs
- Work requests/orders
- Work reception center (WRC) workflow process
- Prioritizing work requests
- Facility maintenance categories
- Maintenance logs
- Computerized maintenance management software (CMMS)
- Computer-aided facility management (CAFM)
- Gathering feedback and evaluating service
- Facility helpdesk
- Creating WRC function
- Maintenance classifications (e.g., preventive maintenance, condition-based maintenance, unplanned maintenance)
- Annual goal setting for maintenance, repair, and replacement
- Maintenance plans and KPIs
- System maintenance tools

**Work Management Proficiency Indicators (Task Statements)**

- Demonstrates ability to manage preventive, condition-based, and unplanned maintenance.
- Demonstrates knowledge of and ability to perform testing and obtain measurements required for predictive maintenance.
- Demonstrates ability to understand and provide input for qualitative and quantitative key performance indicators (KPIs) for measuring aspects of facilities operations and management.
- Coordinates and manages facilities helpdesk function.
- Develops work plan and procedures for planned and unplanned outages.
- Coordinates time management for staff.
- Leads planning and scheduling of workload and assigns team priorities.



# Utility Management

**Definition:** *Utility management* includes the techniques to control the utility services required to operate a facility.

Facility managers are charged with moving their facilities toward best practices for utility management. This directive is a result of many factors—a desire for cost savings, environmental stewardship, federal or local regulations. The facility manager's role in utility management is to look for efficiencies at the individual component level, the system level, and the organization level. By maximizing the efficiency and usability of the building, facility management supports the goals of the O&M business and the mission of the organization.

## Key Concepts:

- Relationship between demand and consumption
- FM role in utility management (three levels)
- Heating and cooling water systems (e.g., chillers, cooling towers, boilers)
- Domestic plumbing systems
- Irrigation systems
- Water use
- Water-saving tactics
- Metering and submetering
- Water management planning model
- Water use auditing
- Water management action plan
- Primary types of wastewater
- Water efficiency practices and conservation tips
- Energy management components
- Energy use intensity (EUI)
- Building energy metering
- Energy load and power factors
- Common energy programs
- Renewable energy (e.g., solar, wind, hydroelectric)

**Utility Management Proficiency Indicators (Task Statements)**

- Demonstrates knowledge of relationship between demand and supply needs.
- Acts as liaison for service providers, emergency contacts.
- Demonstrates knowledge of where system shut-offs are located and ensures labeling of all shut-offs.
- Performs system metering.
- Demonstrates ability to perform benchmarking and record metrics for utility rates.
- Performs peak and off-peak load management.
- Demonstrates knowledge of regulated and deregulated power systems.
- Leads energy conservation efforts for efficient and optimized usage.

# Space Management

**Definition:** *Space management* techniques are used to estimate and plan space. Space management uses software to plan efficient space occupancy while preserving optimal working conditions and business function.

A facility manager is responsible for the space inside and outside an organization's structures. Space management is a strategic approach to using space so the organization gets maximum return on the myriad investments associated with owning or leasing space for people to work in. It involves planning and designing the space for efficiency and setting up optimal working environments and surroundings to best achieve the organization's objectives.

Facility management ensures that the facility space aligns with the organization's direction and overall objectives by:

- Ensuring that the organization has a space strategy that aligns with its short- and long-term goals and culture.
- Confirming that a good business plan is in place on which to base a space plan.
- Managing space use through established space standards.
- Assigning owners to spaces and managing the space according to architectural application, organizational purpose, and departmental/work function.
- Staying current on the organization's industry/field, the organization's growth, and upcoming changes in laws, statutes, and ordinances that impact space.

## Key Concepts:

- Alignment of space structure and organizational objectives
- Definition of space management
- Space requirements
- Macro- and micro-level space forecasting
- Programming space needs
- Space management policies
- Space guidelines
- Space management planning criteria
- Churn management
- CAFM and CAD technology for space planning
- Space utilization
- Space estimation tools (e.g., adjacency matrix, bubble diagrams, zone/stacking/block plans)
- Workspace design data elements
- Workspace requirements (workstations, ergonomics, lighting)
- Flexible work arrangements
- Space management sustainability strategies
- Relocation and move management

**Space Management Proficiency Indicators (Task Statements)**

- Creates a space strategy that supports the organization's objectives.
- Forecasts space needs (macro- and micro-level).
- Ensures proper space allocation through space management planning.
- Uses integrated workplace management systems (IWMS) and building information modeling (BIM) to assist in space management.
- Implements policies and procedures to ensure that facilities are accessible.
- Develops and implements comprehensive space standards.
- Creates a space management plan.
- Develops workplace policies in conjunction with strategic priorities.
- Designs space configuration to support distributed workforce and alternate space use (e.g., hoteling, hotdesking, collaborative spaces).
- Manages churn effectively for least workspace disruption.
- Performs furniture acquisition, inventory, and movement.
- Participates in technology decisions for space planning (e.g., telecommunication needs, IT).
- Utilizes CAD technology software to assist in space planning.



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