

# Healthcare Facilities Management

## Module 2: Planning, Design & Construction Student Workbook



Lesson 4 ~ P D & C 1



[www.FM-College.com](http://www.FM-College.com)



---

---

---

---

---



---

---

---

---

---

1

# ISO 41001:2018

© 2019 FM College, Inc. All Rights Reserved

---

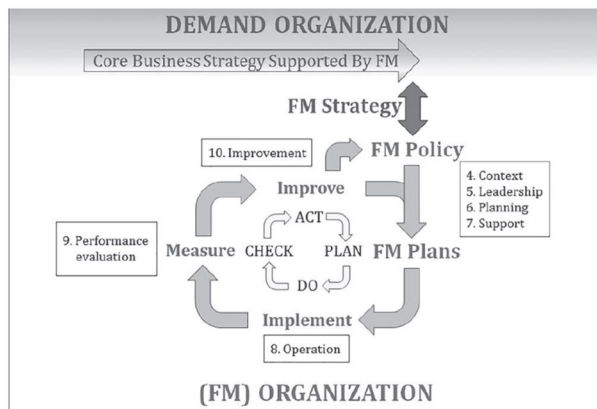
---

---

---

---

## ISO 41001:2018



© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## ISO 41001: 2018 Table of Contents

ISO 41001:2018(X)	
CONTENTS	Page
Foreword	iv
Introduction	v
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Context of the organization	6
4.1 Understanding the organization and its context	6
4.2 Determining the needs and expectations of interested parties	6
4.3 Determining the scope of the FMS system	6
4.4 FMS system	6
5 Leadership	6
5.1 Leadership and commitment	6
5.2 Organizational roles, responsibilities and authorities	6
6 Planning	7
6.1 General	7
6.2 Objectives and planning for achievement	7
7 Support	8
7.1 Resources	8
7.2 Competence	8
7.3 Awareness	8
7.4 Communication	8
7.5 Documented information	8
7.5.1 General	8
7.5.2 Control of documented information	8
7.5.3 FMS objectives and data requirements	10
7.6 Organizational knowledge	10
8 Operation	11
8.1 Operational planning and control	11
8.2 Coordination with interested parties	11
8.3 Integration of processes	11
9 Performance evaluation	11
9.1 Monitoring, measurement, analysis and evaluation	11
9.2 Internal audit	11
9.3 Management review	12
10 Improvement	13
10.1 Nonconformity and corrective action	13
10.2 Continual improvement	13
10.3 Innovation	14
Annex A Collaborative conditions on the use of the document	15
Bibliography	15

ISO 41

INTERNATIONAL  
STANDARD

ISO  
41001

First edition  
2018-04

**Facility management — Management  
systems — Requirements with  
guidance for use**

Facility management — Systèmes de management — Exigences avec  
directives d'utilisation

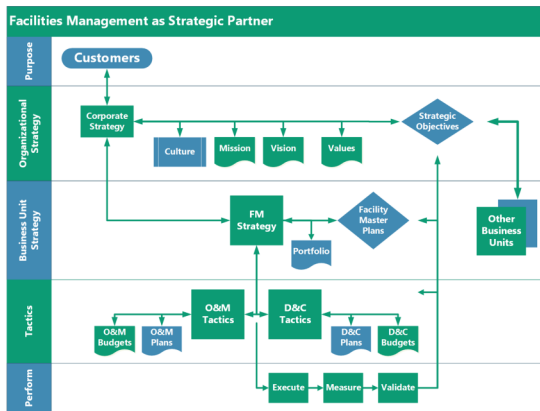
## ISO 41001: Audit Example ~ Facility Maintenance

- Facility Maintenance Audit**  
Sample Questions by Business Objective
- 1. Facility maintenance operations are performed in compliance with corporate and regulatory requirements [including licensing, certification and training requirements].**
    - How does the region monitor, track, and keep current with regulatory, corporate and industry compliance requirements?
    - How does the region ensure new regulations are identified and implemented timely?
    - How does the region ensure maintenance record keeping is adequate to support/meet regulatory, industry, and/or regional reporting requirements?
    - How are incidents of non-compliance with regulatory, corporate or industry requirements reported and tracked to ensure timely remediation?
    - How are frequencies tracked? Is the Regional Compliance Officer involved?
    - How does the region ensure staff have or receive required certifications and licenses, if applicable? How does the region provide/support training needs to them tracking of certification/license expiration to ensure they remain current?
  - 2. Facility maintenance operations are monitored to assess their effectiveness and identify needs and trends, including the use of metrics and key performance indicators (KPIs) across the program.**
    - What key reports, dashboards, scorecards, etc. are reviewed to monitor the effectiveness of the facility maintenance program and activities?
    - Which metrics are monitored in this region on a regular basis? What frequency?
    - What actions are driven by the KPIs? Have thresholds been defined that trigger certain actions?
    - What benchmarks are utilized to measure performance – are they driven by the industry or corporate?
    - Which metrics provided by Program Offices are most useful? Are all metrics provided by Program Offices used by the region?
    - What is the source of regional KPI data?
  - 3. The Computerized Maintenance Management System (CMMS) contains a current, complete, and accurate inventory of all assets and work orders related to facility maintenance.**
    - Who has access to modify settings in CMMS? Admin/Change access privileges? Enter data?
    - How is CMMS utilized as part of daily work by facilities staff?
    - How are new equipment and other assets purchased and logged in CMMS?
    - How are the initial configuration/settings of the equipment determined? Who has access to change the settings (e.g. establish thresholds, set alerts, etc.)? How does the region ensure equipment is utilized in the most effective and efficient manner?
    - What is the methodology to assign work orders / preventive maintenance to staff?
    - How is prioritization of Work Order or Preventive Maintenance determined?
    - How does the region ensure all applicable equipment and assets are recorded in CMMS?
    - How does the region ensure CMMS is updated accurately (i.e. the service performed and type/configuration is entered correctly) and timely (i.e. all completed maintenance is entered)?
    - Are all log reports generated from CMMS?
    - How does the region ensure equipment/manufacture maintenance requirements are setup accurately in CMMS?

# 2

## Strategic Plan Development

### FM as Strategic Partner



© 2019 FM College, Inc. All Rights Reserved

---



---



---



---

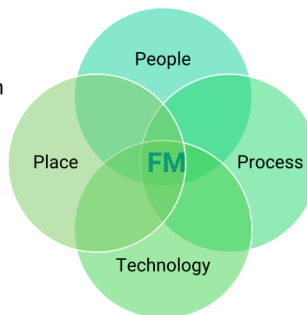


---

### The Organization: Learning & Creativity

#### Strategic Partner Role

- Managing the physical environment with the people and work of the organization can be broken down into coordinating people, place, processes and technology.



© 2019 FM College, Inc. All Rights Reserved

---



---



---



---

## The Organization: Learning & Creativity

### FM Strategic Partner Role for Entire Organization

- Help all business leaders, partners and customers succeed.
- Develop and communicate mission, vision and strategy aligned with entire organization's requirements.
- See big picture.
- Create momentum for change.
- Connect with people at their level.
- Be the go-to person for guidance on FM issues.
- Seek and act on wise counsel.
- Be a good follower as a project participant.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## The Organization: Learning & Creativity

### Within FM Organization Leadership Roles

- Provide guidance to staff and service providers.
- Influence decisions and attitudes.
- Conduct organizational development (OD)
- Promote continuous improvement
- Support peers as an effective partner

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## The Organization: Learning & Creativity

### Frequent (and re-occurring) FM Organizational Goals

- Re-engineering of systems & processes
- Continuous improvement
- Change management
- Best practices



© 2019 FM College, Inc. All Rights Reserved

---



---



---

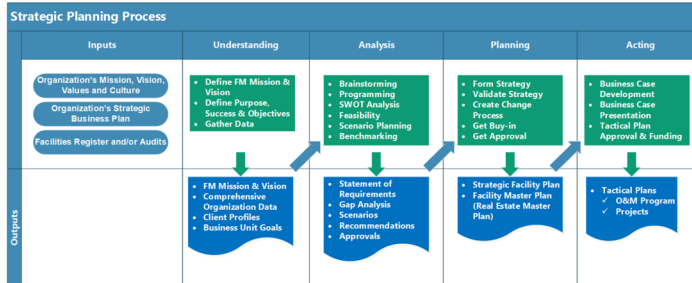


---



---

## Process



© 2019 FM College, Inc. All Rights Reserved

---



---



---



---



---



### Strategic Plan Development: Inputs

- Demand Organization Data
- Mission, Vision, Values
- Strategy/Plan
- FM Business Data
- Facility Register/Inventory
- Facility Audits/Condition



© 2019 FM College, Inc. All Rights Reserved

---



---



---



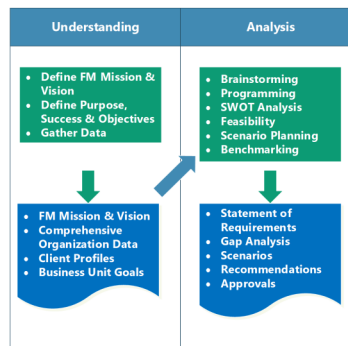
---



---

### Strategic Plan Development: Understanding & Analysis

- Understanding
- Define FM's role & success
- What are the needs of the Demand Organization
- Analysis
- Program Development



© 2019 FM College, Inc. All Rights Reserved

---



---



---



---



---

### Strategic Plan Development: Planning

- Formulate & Validate Strategy
- Change/Review Process
- Authorization
- Strategic Facility Plan
- Facility (Real Estate) Master Plan



© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

### Strategic Plan Development: Acting/Outputs

- Business Cases
- Tactical Plans
- Programs
- Projects
- Budgets



© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

# 3

## Capital Planning Process

- Assessment
- Asset Management
- Strategic Planning
- Capital Budgeting (Multi-year)

© 2019 FM College, Inc. All Rights Reserved

### Planning: Time Horizons

Asset or Activity	Planning (Life) Horizon	Budget Horizon	Schedule Horizon	Assessment Horizon
Buildings	30 – 50 Years	Annual + 5 Yr	3-5 Years	Annual
Equipment	10 -20 Years	Annual + 2 Yr	3-5 Years	Qtr + Annual
Interiors	7 – 15 Years	Annual + 2 Yr	5 Years	Qtr + Annual
Operations	3 -5 Years	1 – 2 Years	3 – 5 Years	Qtr + Annual
Major Renewal	5 – 10 Years	3 – 5 Years	3 Years	Annual + 5 Yr
New Facilities	5 – 10 Years	5 – 10 Years	5 Years	Strategic
Others, etc.	Varies	Varies	Varies	Varies

The need for new facilities is a decision based on organizational goals, not necessarily the condition or useful life of existing facilities.

© 2019 FM College, Inc. All Rights Reserved

## Assessment

### Building & Component Analysis

- Useful Life
  - Total useful life or depreciable life. The estimated time, in years, that a **New** building or component can be expected to serve its intended function if properly constructed in its present application or installation
- Remaining Useful Life
  - The **remaining** estimated time, in years, that a building or component can be expected to continue to serve its intended function. Cost at time of Renewal (Future)
- Condition Assessment
  - The task of evaluating the current condition of the component based on observed or reported characteristics.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Asset Management

### Budget Implications

- 30 year plan?
- 5 year horizon
  - Condition assessment
  - Capital Budget Planning
- Planning for growth, shrinkage, sale & renewal
- Leveling of capital budget (next slide)

© 2019 FM College, Inc. All Rights Reserved

---

---

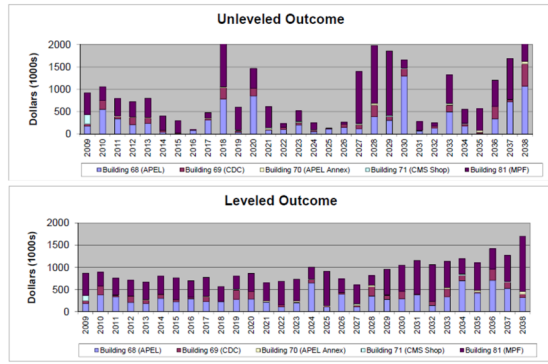
---

---

---

## Asset Management

### Leveling of capital budget



© 2019 FM College, Inc. All Rights Reserved

## Asset Management

### Terms

#### > Sunk Cost

- A sunk cost is a cost that has already been incurred and cannot be recovered.
- A sunk cost differs from future costs that a business may face, such as decisions about inventory purchase costs or product pricing.
- Sunk costs (past costs) are excluded from future business decisions because the cost will be the same regardless of the outcome of a decision.

#### > Salvage Value

- an estimated amount that is expected to be received at the end of a plant asset's useful life. Salvage value is sometimes referred to as disposal value, residual value, terminal value, or scrap value.

#### > Disposal cost

- An estimated amount that is expected to be expended at the end of a plant asset's useful life in order to remove or dispose of it.

#### > Deferred Maintenance

- Maintenance, system upgrades, or repairs that are deferred to a future budget cycle or postponed until funding becomes available.

© 2019 FM College, Inc. All Rights Reserved

## Asset Management

### ➤ Deferred Maintenance

- Maintenance, system upgrades, or repairs that are deferred to a future budget cycle or postponed until funding becomes available.
  - In order to address a deferred maintenance backlog, you must:
    - Identify why projects, maintenance, and repairs have been deferred.
    - Recognize and understand the scale of the problem.
    - Quantify and communicate the financial impact of deferred maintenance.
    - Prioritize projects and develop a strategy to secure adequate funding.
    - Conduct preventive maintenance and complete repairs promptly to avoid backlog redevelopment.

© 2019 FM College, Inc. All Rights Reserved

---



---



---



---



---

## Asset Management

### Depreciation Methods

#### ➤ Straight line

- Straight line depreciation spreads the cost of an item evenly over its useful life.

#### ➤ Units of Production

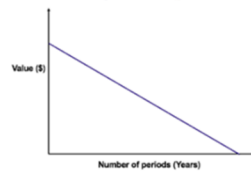
- The units of production method of depreciation is based on an asset's usage, activity, or parts produced instead of the passage of time. Under the units of production method, depreciation during a given year will be very high when many units are produced, and it will be very low when only a few units are produced.

#### ➤ Expensing

#### ➤ Leasing

#### ➤ Tax strategy issues

**Straight Line Depreciation**



© 2019 FM College, Inc. All Rights Reserved

---



---



---



---



---

## Asset Management

Considerations:

- > Condition Assessment
- > Usability
- > Deferred Maintenance
- > Asset/Building Class
- > Capital Planning

Facility Condition Index (FCI)

- > Used in facilities management to provide a benchmark to compare the relative condition of a group of facilities.
- > 3 cost factors
  - DM -> Deferred Maintenance cost
  - CR -> Capital Renewal cost (renovation cost)
  - CRV -> Current Replacement Value

$$FCI = \frac{DM + CR}{CRV}$$

(Introduced as a concept on today, but many applications)

© 2019 FM College, Inc. All Rights Reserved

---



---



---



---

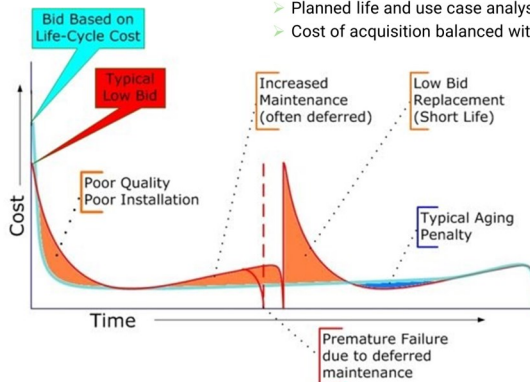


---

## Asset Management

Life-cycle approach

- > Planned life and use case analysis
- > Cost of acquisition balanced with cost of O&M



© 2019 FM College, Inc. All Rights Reserved

---



---



---



---



---

## Strategic Planning – Site Inventory & Audit

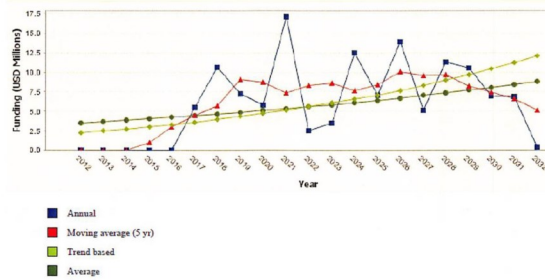
Number	Name	Use	Age	Size	Replacement Value	Cost/Unit	FCI Cost	FCI
BMT	Bremerton BHS	Medical - Clinic	3	7,156 SF	1,192	0.17	0	0.00
BME	Bremerton East Internal Medicine	Medical - Clinic	32	4,836 SF	818	0.17	300	0.37
FED	Federal Way Medical Center	Medical - Clinic	37	60,997 SF	10,089	0.17	3,389	0.34
KAB	Kings Administrative Building	Office	35	48,365 SF	9,671	0.20	2,193	0.25
OMC	Olympia Medical Center	Medical - Clinic	18	149,688 SF	24,084	0.16	2,409	0.10
PRT	Port Orchard Medical Center	Medical - Clinic	22	62,987 SF	9,375	0.15	786	0.08
PHO	Poulsbo Medical Center	Medical - Clinic	16	7,605 SF	1,268	0.17	214	0.17
SIL	Silverdale Medical Center	Medical - Clinic	28	38,362 SF	7,964	0.21	1,075	0.13
SLO	Silverdale Optical	Medical - Clinic	14	5,150 SF	665	0.13	66	0.10
TGB	Tacoma Hear and See Center	Medical - Clinic	14	7,148 SF	756	0.11	12	0.02
TMA	Tacoma Mall Behavioral Health and Speech	Medical - Clinic	27	11,410 SF	1,712	0.15	262	0.15
TMD	Tacoma Modula Building	Office	16	1,030 SF	184	0.18	0	0.00
TAS	Tacoma South Medical Center	Medical - Clinic	27	35,192 SF	6,719	0.19	1,357	0.20
TAD	Tacoma South Region Administration	Medical - Clinic	27	10,356 SF	2,560	0.25	222	0.09
TSC	Tacoma Specialty Center	Medical - Clinic	21	154,514 SF	29,965	0.19	2,998	0.10
<b>Total :</b>				<b>604,396</b>	<b>107,022</b>	<b>NA</b>	<b>15,283</b>	<b>0.14</b>

© 2019 FM College, Inc. All Rights Reserved

## Strategic Planning - Analysis

- Annual Spending Peaks**

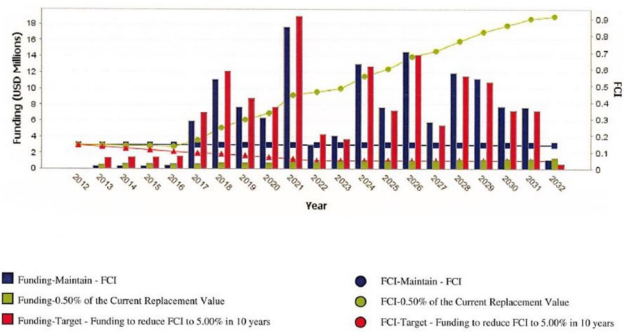
The profile of annual spending is non-linear with the growth in annual spending peaking in years 2018, 2021, 2024, 2026 and 2028.



© 2019 FM College, Inc. All Rights Reserved



### Capital Budgeting Plan - Scenarios



© 2019 FM College, Inc. All Rights Reserved

---



---



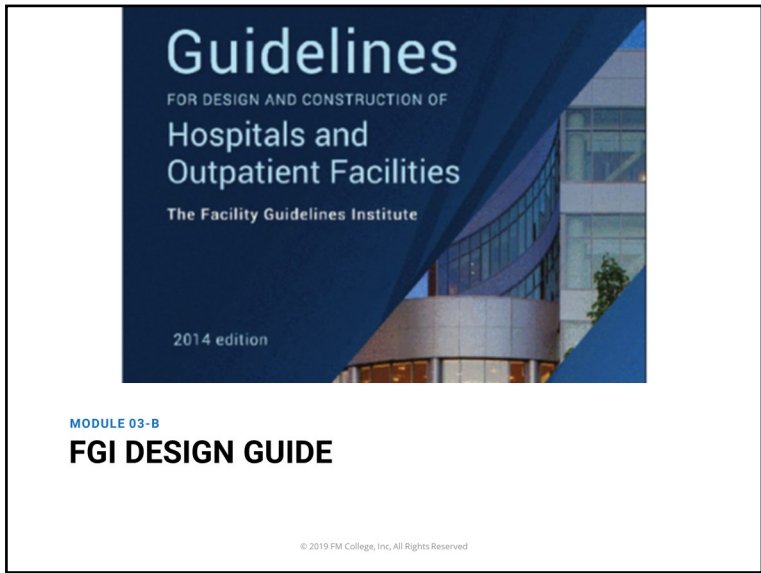
---



---



---



© 2019 FM College, Inc. All Rights Reserved

---



---



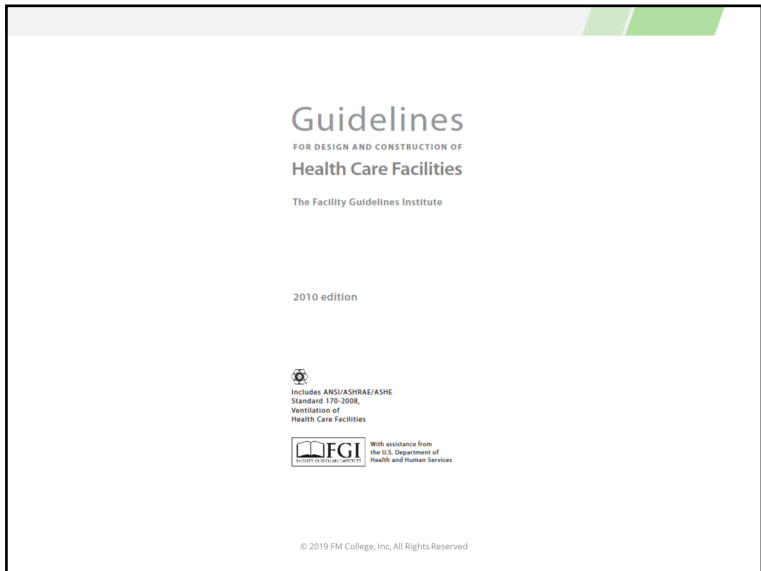
---



---



---



---

---

---

---

---

**MODULE 03-C**  
**FM PROJECT OVERVIEW**

Enter a brief description of the module. Describe the topic of the module and what learners should pay special attention to.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

1

---

## FM Role & Concerns

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Facility Manager's Role in Project

<p>FM Role in Project varies:</p> <ul style="list-style-type: none"><li>&gt; Initiator</li><li>&gt; Sponsor</li><li>&gt; Project Manager</li><li>&gt; Project Team Member</li><li>&gt; Customer/End-user</li></ul>	<p>FM Viewpoint differs significantly from typical PM</p> <ul style="list-style-type: none"><li>&gt; Often involved much earlier</li><li>&gt; Often owns project upon completion</li><li>&gt; Focus is often on "lifecycle cost" as compared to "first cost"</li><li>&gt; May be involved in a 100 or more projects at same time in various roles and stages</li></ul>
--	--

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Project Planning in Facilities Maintenance

### Reasons to Initiate FM Projects

- Implement strategic facilities plan/master plan elements.
- Implement tactical plans beyond regular operations and maintenance.
- Respond to a mandate from a sponsor accompanied by funds release.
- Resolve problems or implement performance improvements.
- Address results of programming.
- Implement planned changes.
- Respond to unplanned changes.

### Common FM Projects

- Forecasting facility needs
- Facilities audits
- New construction
- Renovation, addition, alteration, demolition
- Major equipment replacements
- Churn (e.g., minor relocations)
- Major relocations
- Organizational change management
- Interior programming/space planning
- Procurement

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Project Planning in Facilities Maintenance

### R&M Projects

- FM Responsible party
- May be maintenance or operations
  - Maintenance = repairs
  - Operations = programs, procurement, policies, etc.
- Operations budget hit (i.e. annual recurring expenses plus first cost.)
- Tenant occupancy often an issue

### Capital Renewal Projects

- Larger in scope
- May have been planned and scheduled as part of multi-year plan.
- Schedule and cost critical and may over-rule quality
- FM usually advisor or team member only
- Tenant occupancy may be an issue but major nature of activity usually defines
- Capital Replacement / New Construction Projects
- Strategic goals of organization define
- FM Consulted, but authority limited
- Major role of FM is as occupier
- 2nd major role as move coordinator
- Change-over from construction to M&O usually a trouble spot without extra care

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Healthcare Facility Manager – Typical Project Concerns

- |                                  |   |
|----------------------------------|---|
| Feasibility studies              | Questions regarding upgrading or expansion    |
| Construction cost estimate items | Work handled as projects                      |
| Build versus renovate            | Capital and churn projects                    |
| Baseline data for planning       | Upgrading building systems                    |
| Pre-design planning              | Base construction cost vs. total project cost |
| Lack of pre-planning             | Request for Bids                              |

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Build versus renovate

- *The need for new facilities is a decision based on organizational goals, not necessarily the condition or useful life of existing facilities.*
- Replace “In kind” or upgrade (energy efficiency, etc.)
- Component update vs System upgrade (particularly an issue with technology, BAS, etc.)
  - Component in proprietary system (TEC) is obsolete, replacing with new unit perpetuates the proprietary system. How many components to be replaced justifies new open-protocol system?
- Change in use/capacity of building? Can it be supported in existing footprint? Is an addition a better solution than replacement?

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Baseline data for planning

### Existing

- Occupancy
- Capacity
- System efficiency

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Lack of Pre-design planning

Not an issue for large projects, but for many smaller & renovation projects.

FM should develop business case for what he sees as project needs. This should be interfaced with Strategic/Tactical planning process.

- Example: It is hard to get money for energy efficiency upgrades in a project, if only "like for like" equipment was all that was in initial budget.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Lack of pre-planning

Again not an issue for larger projects.

However smaller projects it is.

Based on useful life, etc. FM needs to be forecasting planned scope for projects about 3 years out, and working with the Chief Engineer to plan and schedule.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

# 2

## FM Projects

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

## Upgrading Building Systems

### Big concern for O&M

- BAS system obsolescence
- Improved capabilities
- Changed needs (IT closets, etc.)
- Demand for energy savings balanced with comfort/productivity

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Coordinate planning for special maintenance, upgrade, and renovation projects

Some of these are small enough that they are handled directly by Facilities and maintenance staff.

- If so, a Project Manager is probably not assigned.
- In this case the FM or their delegate, must manage the project.
- Not unusual to have many projects like this going on at any particular time.
- Each needs to be evaluated and managed for all concerns of larger projects, including ICRA and ILSM.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---



Review infrastructure needs for changes in:

- > Workload
- > Function
- > Services
- > Operational requirements
- > Capital equipment installations

Where changes are needed they need to be documented as a business case through the strategic/tactical planning processes.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

Propose and Gain Approval on Building System Improvement Projects

Business Cases a critical tool for your success!

Simple Business Case:

- > Problem & Proposed Solution
- > Background
- > Scope
- > Benefits
- > Financial Metrics
- > Risk Mitigation
- > Conclusion
- > Recommendation
- > Request for Authorization

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Fundamentals: Facilities Project Planning

(If not large enough to be programmed as “full” project)

### Basics

- > Identify & Meet with Stakeholders
- > Set & Prioritize Goals
- > Define Deliverables
- > Create the Project Schedule
- > Identify Issues and Complete a Risk Assessment
- > Present the Project Plan to Stakeholders
- > Get formal approval (Project Charter)

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Develop institutional design standards

Hardware  
Plumbing  
Lights  
Electrical systems  
etc.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Review plans for building

Acquisitions  
Alterations  
Equipment

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Represent organization in matters related to healthcare facilities

With:

- > contractors
- > architects
- > inspectors
- > Suppliers

Scheduling and installation coordination

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

## Owner's Team & Expert Services

- Real Estate
- Contracting/Procurement
- Cost Management
- Risk Management
- Technology
  - IT
  - Building Technology

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---



**MODULE 03-D**  
**PROJECT MODEL**

Enter a brief description of the module. Describe the topic of the module and what learners should pay special attention to.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

# 1

## Introduction

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Fundamentals: What is a Project?

A project is defined as:  
"a temporary endeavor undertaken to  
create a unique product, service or  
result"

PMBOK (Project Management Body of  
Knowledge) 6<sup>th</sup> edition

### Project Attributes

- Time Frame
- Purpose
- Ownership
- Resources
- Roles
  - Project Manager
  - Project Sponsor
  - Subject Matter Experts
  - Technical Experts

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

## Project Management Key Components

Table 1-3. Description of *PMBOK® Guide* Key Components

<i>PMBOK® Guide</i> Key Component	Brief Description
Project life cycle (Section 1.2.4.1)	The series of phases that a project passes through from its start to its completion.
Project phase (Section 1.2.4.2)	A collection of logically related project activities that culminates in the completion of one or more deliverables.
Phase gate (Section 1.2.4.3)	A review at the end of a phase in which a decision is made to continue to the next phase, to continue with modification, or to end a program or project.
Project management processes (Section 1.2.4.4)	A systematic series of activities directed toward causing an end result where one or more inputs will be acted upon to create one or more outputs.
Project Management Process Group (Section 1.2.4.5)	A logical grouping of project management inputs, tools and techniques, and outputs. The Project Management Process Groups include Initiating, Planning, Executing, Monitoring and Controlling, and Closing. Project Management Process Groups are not project phases.
Project Management Knowledge Area (Section 1.2.4.6)	An identified area of project management defined by its knowledge requirements and described in terms of its component processes, practices, inputs, outputs, tools, and techniques.

Source: *PMBOK 6th Edition*

© 2019 FM College, Inc. All Rights Reserved

---



---



---

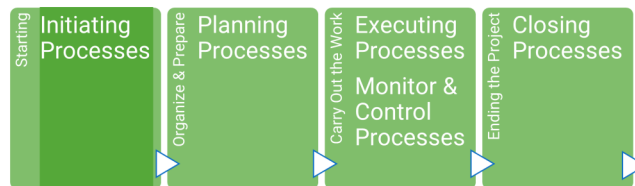


---



---

## Project Life Cycle: Phases, Processes & Gates



© 2019 FM College, Inc. All Rights Reserved

---



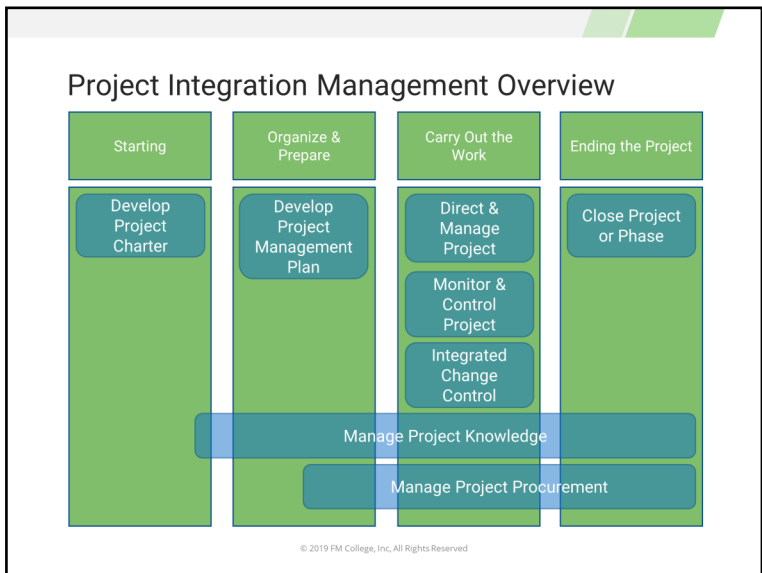
---



---



---



---

---

---

---

---

# 2

## Project Environment

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## The Environment in Which Projects Operate

### Influences

- Enterprise Environmental Factors (EEFs)
  - External
  - Internal
- Internal Organizational Process Assets
  - Processes, Policies & Procedures
  - Corporate Knowledge Base
- Organizational Systems
  - Management Elements
  - Governance Frameworks
  - Organizational Structure Types

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Internal Enterprise Environmental Factors (EEFs)

- Culture, Structure & Governance
- Geographic distribution of facilities
- Infrastructure
- IT systems & software
- Resource availability
- Employee Capability

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---



### External Enterprise Environmental Factors (EEFs)

- > Marketplace conditions
- > Social/cultural influences
- > Legal restrictions
- > Commercial databases
- > Academic research
- > Financial considerations
- > Physical environment elements

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

### Organizational Process Assets (OPAs)

- > Plans
  - > Processes
  - > Policies
  - > Procedures
  - > Knowledge base
- Influences
- > Initiating & Planning
  - > Executing, Monitoring & Control
  - > Closing

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Organizational Systems

- Management Elements
  - Division of work & authority to perform
  - Responsibility & discipline
  - Command, direction & goals
- Governance Frameworks
  - Consideration of people, roles, structures & policies
  - Providing direction & oversight through data and feedback
- Organizational Structure Types
  - Factors (many)
  - Value
  - Relative importance

© 2019 FM College, Inc. All Rights Reserved

---

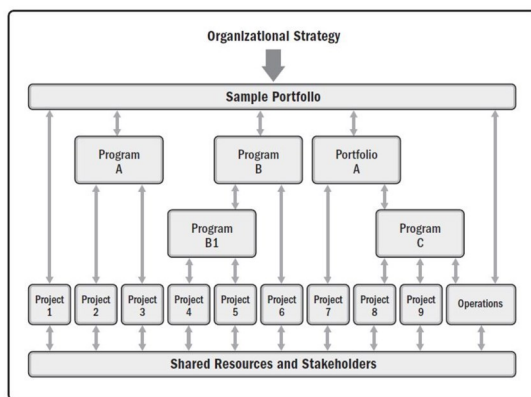
---

---

---

---

## Portfolio, Programs, Projects & Operations



Source: PMBOK 6<sup>th</sup> Edition

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

# 3

## Role of the Project Manager

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

### Project Manager for Large Project like a Conductor

- Membership & roles
- Responsibility for team
- Knowledge and skills



© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Role of the Project Manager

### Project Management Skills / Responsibilities

- > Communication
- > Problem Solving
- > Provide realistic schedules.
- > Ensure realistic cost estimates.
- > Manage labor productivity and job costs.
- > Track permissions, materials and equipment.
- > Ensure stakeholder satisfaction with direction and deliverables.

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Project Teams: Functional Organization



© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---

## Project Teams: Strategic Organization

### Project Sponsor

- ✓ Make key business decisions for the project
- ✓ Approve the project budget
- ✓ Ensure availability of resources
- ✓ Communicate the project's goals throughout the organization



### Executive Sponsor

- ✓ Carry ultimate responsibility for the project
- ✓ Approve all changes to the project scope
- ✓ Provide additional funds for scope changes
- ✓ Approve project deliverables

### Project Manager

- ✓ Develop a project plan
- ✓ Manage deliverables per the plan
- ✓ Recruit project staff
- ✓ Lead and manage the project team
- ✓ Determine the methodology used on the project
- ✓ Establish a project schedule and determine each phase
- ✓ Assign tasks to project team members
- ✓ Provide regular updates to upper management

### Business Analyst

- ✓ Assist in defining the project
- ✓ Gather requirements from business units or users
- ✓ Document technical and business requirements
- ✓ Verify that project deliverables meet the requirements
- ✓ Test solutions to validate objectives

© 2019 FM College, Inc. All Rights Reserved

---



---



---

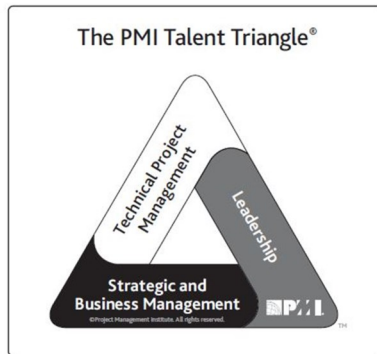


---



---

## Project Manager: More than simply technical skills



Source: PMBOK 6<sup>th</sup> Edition

© 2019 FM College, Inc. All Rights Reserved

---



---



---



---



---

**THANK YOU**

© 2019 FM College, Inc. All Rights Reserved

---

---

---

---

---