





MODULE 03-A
FACILITY MASTER PLAN

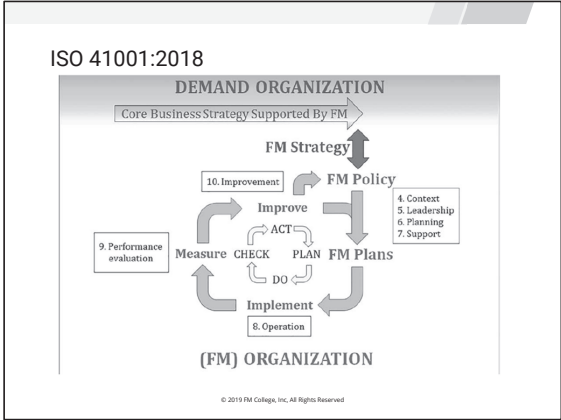
Contribute to the Development of the Facility Master Plan

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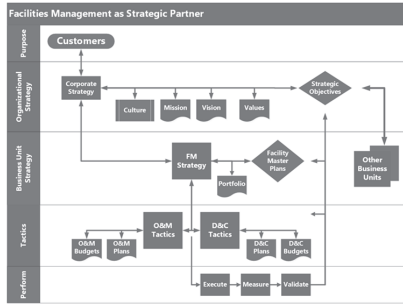
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ISO 41001:2018

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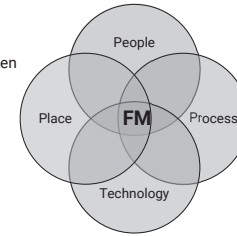
FM as Strategic Partner



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.



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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.

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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

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The Organization: Learning & Creativity

Frequent (and re-occurring) FM Organizational Goals

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

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Process

Strategic Planning Process

	Inputs	Understanding	Analysis	Planning	Acting
	<ul style="list-style-type: none"> Organization's Mission, Vision, Values and Culture Organization's Strategic Business Plan Facilities Register and/or Audit 	<ul style="list-style-type: none"> Define FM Mission & Vision Define Purpose, Success & Objectives Collect Data 	<ul style="list-style-type: none"> Brainstorming Programming SWOT Analysis Feasibility Economic Planning Benchmarking 	<ul style="list-style-type: none"> Form Strategy Validate Strategy Create Change Process Get Buy-in Get Approval 	<ul style="list-style-type: none"> Business Case Development Business Case Presentation Tactical Plan Approval & Funding
Outputs		<ul style="list-style-type: none"> FM Mission & Vision Organizational Organization Data Client Profiles Business Unit Goals 	<ul style="list-style-type: none"> Statement of Requirements Gap Analysis Options Recommendations Approvals 	<ul style="list-style-type: none"> Strategic Facility Plan Facility Master Plans (Real Estate Master Plans) 	<ul style="list-style-type: none"> Tactical Plans ODM Program Projects

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Strategic Plan Development: Inputs

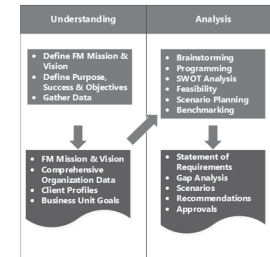
- Demand Organization Data
- Mission, Vision, Values
- Strategy/Plan
- FM Business Data
- Facility Register/Inventory
- Facility Audits/Condition



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Strategic Plan Development: Understanding & Analysis

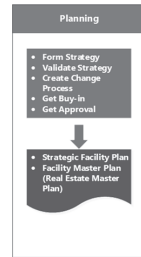
- Understanding
- Define FM's role & success
- What are the needs of the Demand Organization
- Analysis
- Program Development



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Strategic Plan Development: Planning

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



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Strategic Plan Development: Acting/Outputs

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



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Capital Planning Process

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

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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.

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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.

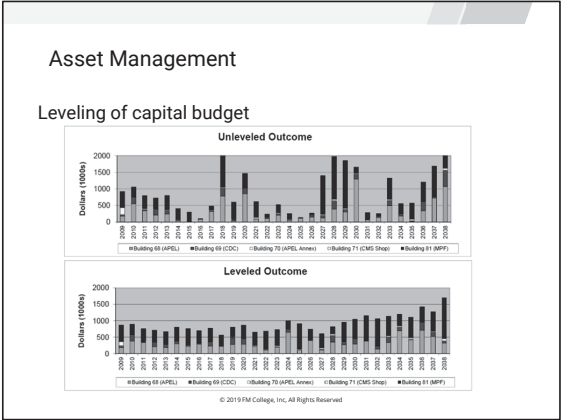
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Asset Management

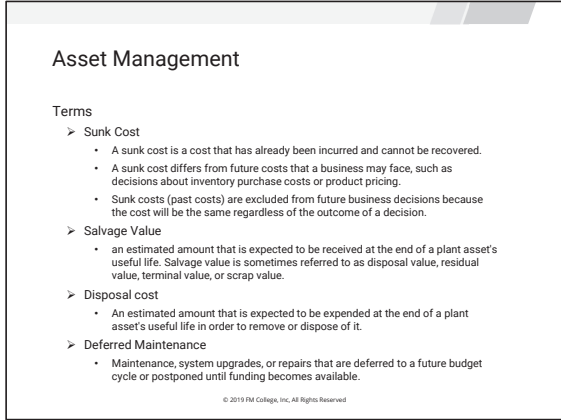
Budget Implications

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

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Proper scheduling of components based on criticality and risk can reduce Deferred Maintenance. It can also provide budget stability for management.



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.

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Asset Management

Depreciation Methods

➤ Straight line

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

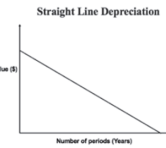
➤ Units of Production

- 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



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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

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

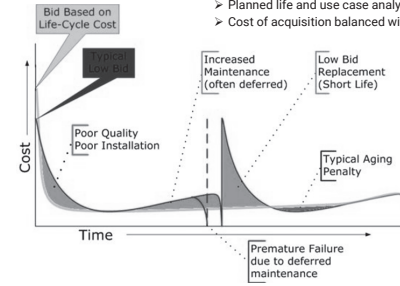
$$FCI = \frac{DM + CR}{CRV}$$

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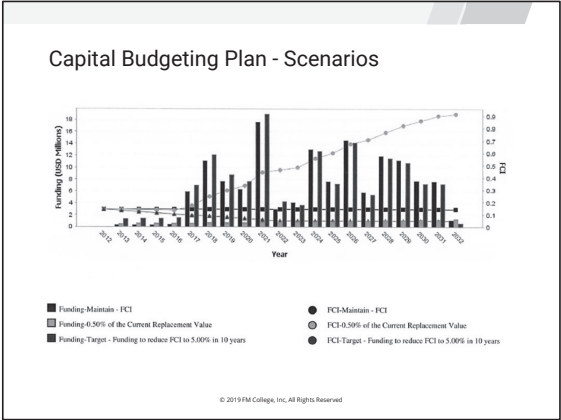
Asset Management

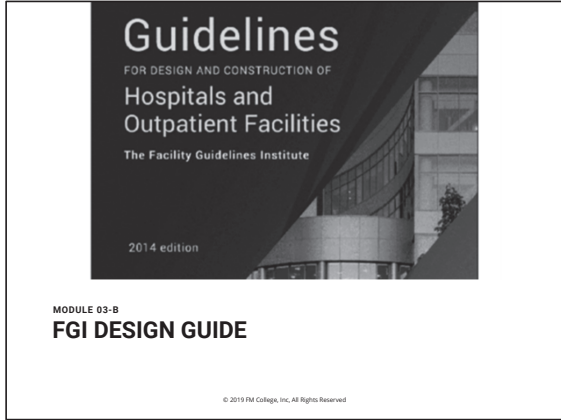
Life-cycle approach

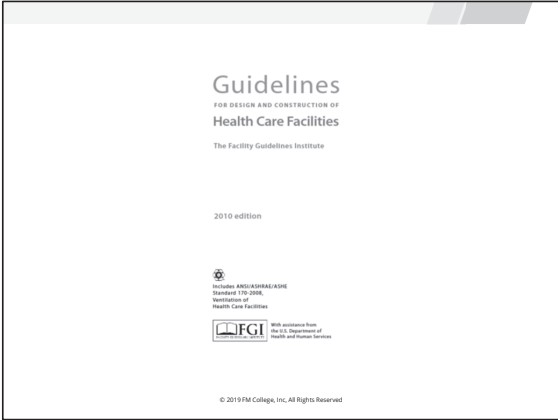
- Planned life and use case analysis
- Cost of acquisition balanced with cost of O&M



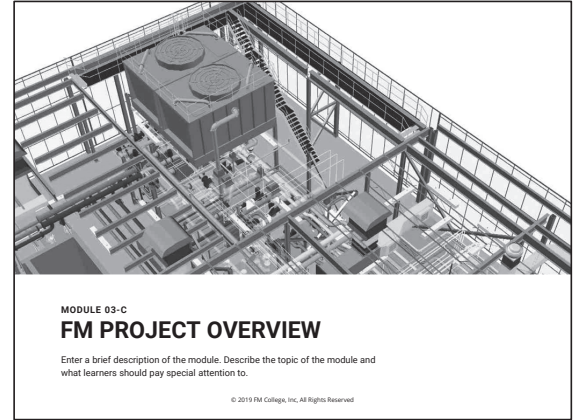
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FGI2010



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FM Role & Concerns

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Facility Manager's Role in Project

FM Role in Project varies:

- > Initiator
- > Sponsor
- > Project Manager
- > Project Team Member
- > Customer/End-user

FM Viewpoint differs significantly from typical PM

- > Often involved much earlier
- > Often owns project upon completion
- > Focus is often on "lifecycle cost" as compared to "first cost"
- > May be involved in a 100 or more projects at same time in various roles and stages

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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

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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

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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

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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?

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Baseline data for planning

Existing

- Occupancy
- Capacity
- System efficiency

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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.

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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.

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FM Projects

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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

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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.

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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.

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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

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<https://www.wrike.com/blog/foolproof-project-plan/>
<http://www.ques10.com/p/4279/what-is-project-what-are-the-attributes-of-project/>

Step 1: Identify & Meet with Stakeholders

A **stakeholder** is anyone who is affected by the results of your project plan. That includes your customers and end users. **Make sure you identify all stakeholders and keep their interests in mind when creating your project plan.** Meet with the **project sponsors** and **key stakeholders** to discuss their needs and expectations, and establish baselines for **project scope**, budget, and timeline. Then create a Scope Statement document to finalize and record **scope details, get everyone on the same page, and reduce the chances of costly miscommunication.** Here's a **Scope Statement Template** to get you started.

Tip: Look beyond the stakeholders' stated needs to identify the underlying desired benefits. These benefits are the objectives your project should deliver.

Step 2: Set & Prioritize Goals

Once you have a list of stakeholder needs, **prioritize them and set specific project goals.** These should outline **project objectives**, or the metrics and benefits you hope to achieve. Write your goals and the stakeholder needs they address in your project plan so it's clearly communicated and easily shareable.

Tip: "But everything is important!" If you're having trouble prioritizing, start ranking goals based on urgency and importance, or **check out these helpful decision making tips.**

Step 3: Define Deliverables

Identify the deliverables and project planning steps required to meet the project's goals. What are the specific outputs you're expected to produce?

Next, estimate due dates for each **deliverable** in your project plan. (You can finalize these dates when you sit down to define your **project schedule** in the next step.)

Tip: Set firm milestones for essential deadlines and deliverables. You'll be able to track your progress once work begins to ensure you complete tasks on time and keep stakeholders happy.

Step 4: Create the Project Schedule

Look at each **deliverable** and define the series of tasks that must be completed to accomplish each one. For each **task**, determine the amount of time it will take, the resources necessary, and who will be responsible for execution.

Next, identify any dependencies. Do you need to complete certain tasks before others can begin? Input deliverables, dependencies, and milestones into your **Gantt chart**, or choose from the many online templates and apps available. What are you waiting for? **Try Wrike's Gantt chart** for free.

Tip: Involve your team in the planning process. The people performing the work have important insights into how tasks get done, how long they'll take, and who's the best person to tackle them. Draw on their knowledge! You'll need them to agree with the **project schedule** and set expectations for work to run smoothly.

Step 5: Identify Issues and Complete a Risk Assessment

No project is risk-free. Crossing your fingers and hoping for the best isn't doing you any favors. Are there any issues you know of upfront that will affect the project planning process, like a key team member's upcoming vacation? What unforeseen circumstances could create hiccups? (Think international holidays, backordered parts, or busy seasons.)

When developing a project plan, consider the steps you should take to either prevent certain risks from happening, or limit their negative impact. Conduct a **risk assessment** and develop a **risk management** strategy to make sure you're prepared.

Tip: Tackle high-risk items early in your project timeline, if possible. Or create a small "time buffer" around the **task** to help keep your project on track in the event of a delay.

Step 6: Present the Project Plan to Stakeholders

Explain how your plan addresses stakeholders' expectations, and present your solutions to any conflicts. Make sure your presentation isn't one-sided. Have an open discussion with stakeholders instead.

Next, you need to determine roles: Who needs to see which reports, and how often? Which decisions will need to be approved, and by whom?

Make your project plan clear and accessible to all stakeholders so they don't have to chase you down for simple updates. Housing all project plan data in a single location, like a **collaboration tool**, makes it easy to track progress, share updates, and make edits without filling your calendar with meetings.

Communicate clearly. Make sure stakeholders know exactly what's expected of them, and what actions they need to take. Just because it's obvious to you doesn't mean it's obvious to them!

Not looking forward to having an open discussion with your stakeholders? Here are **some strategies to arm yourself against difficult stakeholders** to keep the project planning process moving forward.

Tip: If your **plan or schedule doesn't align with stakeholders' original expectations, communicate that now** to avoid any nasty surprises or tense conversations down the line.

Rather than telling stakeholders their expectation or request is unrealistic, tell them what's required to make it happen, including how much time, money, or manpower. Let them decide if it's worth dedicating the extra resources.

After You Create Your Project Plan

Congratulations, you've completed your project plan! Next step: Schedule a project kickoff meeting.

Risks and Assumptions: All projects have an element risk. Risk can arise from many sources, both and external and internal to the project team. For example, internal risk may arise from estimation process. On other hand, external risk may arise due to dependencies on other contractors or vendors.

Interdependent Tasks: Project work requires many interdependent tasks. For example, a network cannot be installed until the hardware is delivered. Or certain requirements cannot be incorporated into design until key user is interviewed.

Organizational Change: Project is planned organizational change. Change must be understood and managed because implementation of the IT project will change the ways people work.

Operating in an Environment Larger than the project itself: Organization chooses projects for a number of reasons, and the projects chosen can impact the organization.

Project Management: Project management is the applications of knowledge, skills, tools and techniques to project activities to meet project requirements. The planning and organization of an organization's resources in order to move a specific task, event or duty toward completion. Project management typically involves a one-time project

rather than an ongoing activity, and resources managed include both human and financial capital.

Develop institutional design standards

- Hardware
- Plumbing
- Lights
- Electrical systems
- etc.

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Review plans for building

Acquisitions
Alterations
Equipment

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Represent organization in matters related to healthcare facilities

With:

- contractors
- architects
- inspectors
- Suppliers

Scheduling and installation coordination

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Owner's Team & Expert Services

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

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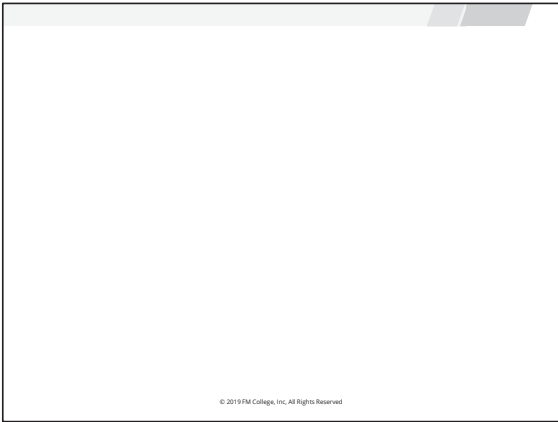
ICRA

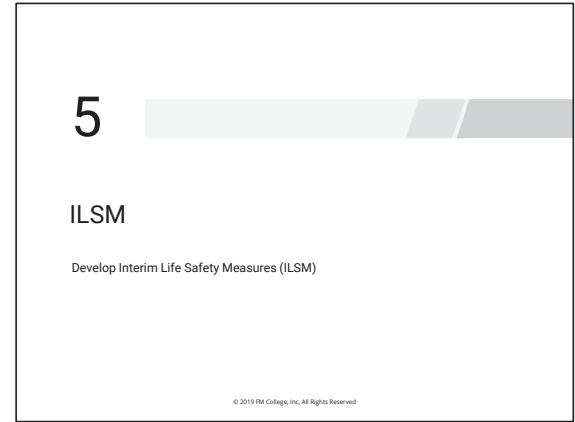
Develop Infection Control Risk Assessment (ICRA)

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Base construction cost vs. total project cost

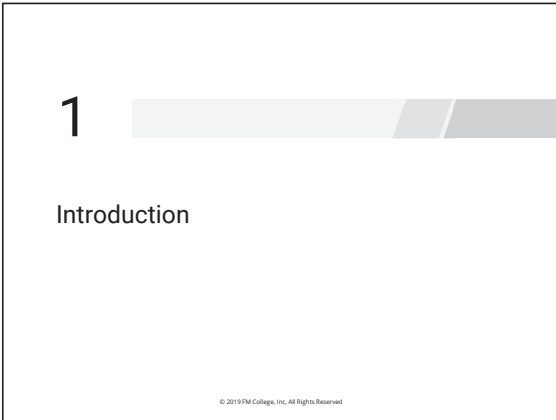
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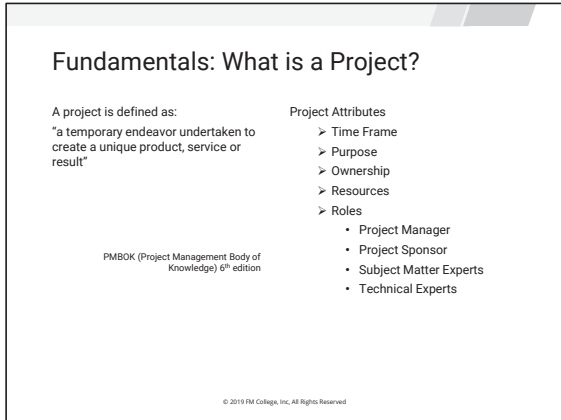


MODULE 03-D
PROJECT MODEL

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

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<http://www.ques10.com/p/4279/what-is-project-what-are-the-attributes-of-project/>

A **project** can be defined as a temporary endeavour undertaken to accomplish a unique product, services or results.

Project can be sequences of task which is planned from beginning to end bounded by time, resources, and required result.

The Following are the attributes of Project:

a. Time frame: Because a project is a temporary endeavour, it must have a definite beginning and end. Many projects begin on a specific date and the date of completion is estimated. Some project has an immovable date when the project must be completed.

b. Purpose: An IT Project can produce any number of results such as a system, a software package, or a recommendation based on a study. Therefore a project's goal must be to produce something tangible and of value to the organization. A Project must have a goal to drive the project in terms of defining the work to be done.

c. Ownership: The project must provide something of value to an individual or group who will own the project product after it is completed. Determining who owns this project is not always easy. For example, different groups may fight over the does and does not own the system, the data, the support, and the final cost of implementing and maintaining the system.

d. Resources: IT project require time, money, people, and technology. Resources provide the means for achieving a project's goal and also act as a constraint. For example, the project's scope, or work to be accomplished is determined directly by the project's goal. If project sponsor asks that an additional feature to be added to the system, however, this will required additional resources in terms of more work on the part of project team.

e. Roles: IT Projects require different individuals with different skills set, they are listed below.

1. Project Manager: She/he is responsible for ensuring that all of the project management and technical development processes are in place and being carried out properly.

2. Project sponsor: The project sponsor may be the client, customer, or organizational resources manager who

will act as champion for the project.

3. Subject matter experts: The subject matter expert may be user or client who has specific knowledge, expertise, or insight in a specific functional area.

4. Technical Expert: Technical expert is needed to provide a technical solution to organization problems.

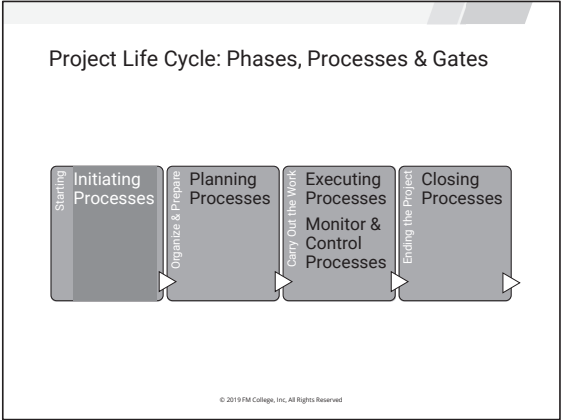
Project Management Key Components

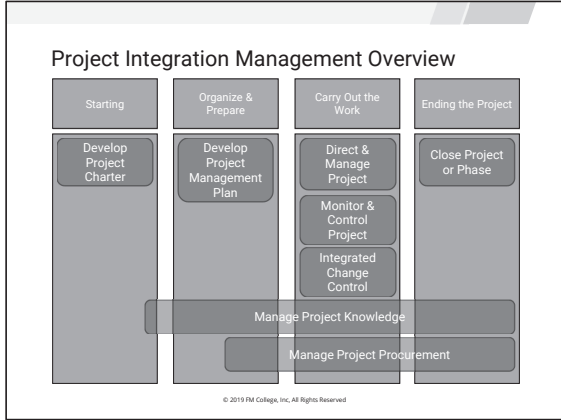
Table 1-3. Description of *PMBOK® Guide* Key Components

<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*

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2

Project Environment

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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

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Internal Enterprise Environmental Factors (EEFs)

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

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External Enterprise Environmental Factors (EEFs)

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

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Organizational Process Assets (OPAs)

- Plans
- Processes
- Policies
- Procedures
- Knowledge base

Influences

- Initiating & Planning
- Executing, Monitoring & Control
- Closing

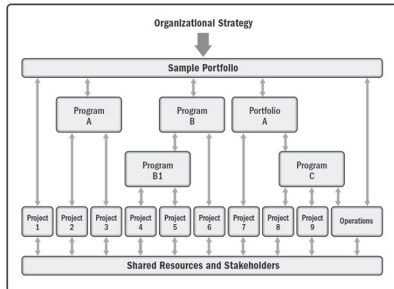
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Organizational Systems

- 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

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Portfolio, Programs, Projects & Operations



Source: PMBOK 6th Edition

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Role of the Project Manager

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Project Manager for Large Project like a Conductor

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



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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.

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https://en.wikipedia.org/wiki/Project_Management_Body_of_Knowledge

Project Management Body of Knowledge

Project Management Body of Knowledge is a set of standard terminology and guidelines (a *body of knowledge*) for *project management*. The body of knowledge evolves over time and is presented in *A Guide to the Project Management Body of Knowledge* (the *Guide to the PMBOK* or the *Guide*), a book whose sixth edition was released in 2017. The Guide is a document resulting from work overseen by the *Project Management Institute* (PMI), which offers the *CAPM* and *PMP* certifications.

Much of the *PMBOK Guide* is unique to project management e.g. *critical path method* and *work breakdown structure* (WBS). The *PMBOK Guide* also overlaps with *general management* regarding planning, organising, staffing, executing and controlling the operations of an organisation. Other management disciplines which overlap with the *PMBOK Guide* include *financial forecasting*, *organisational behaviour*, *management science*, *budgeting* and *other planning methods*.

Earlier versions of the *PMBOK Guide* were recognized as standards by the *American National Standards Institute* (ANSI) which assigns standards in the United States (ANSI/PMI 99-001-2008) and the *Institute of Electrical and Electronics Engineers* (IEEE 1490-2011).^[1]

Purpose

The *PMBOK Guide* is intended to be a "subset of the project management body of knowledge that is generally recognized as a good practice." Generally recognized means the knowledge and practices described are applicable to most projects most of the time and there is a consensus about their value and usefulness. 'Good practice' means there is a general agreement that the application of the knowledge, skills, tools, and techniques can enhance the chance of success over many projects.^[1] This means that sometimes the "latest" project management trends, often promoted by consultants, may not be part of the latest version of *The PMBOK Guide*.

The *PMBOK Guide* is process-based, meaning it describes work as being accomplished by processes. This approach is consistent with other management standards such as *ISO 9000* and the *Software Engineering Institute's CMMI*. Processes overlap and interact throughout a project or its various phases.

Inputs (documents, plans, designs, etc.)

Tools and Techniques (mechanisms applied to inputs)

Outputs (documents, plans, designs, etc.)

The *PMBOK* as described in the Guide recognizes 49 processes that fall into five basic process groups and ten knowledge areas that are typical of most projects, most of the time.

Process groups^[edit]

The five *process groups* are:

Initiating: processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.

Planning: Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.

Executing: Those processes performed to complete the work defined in the project management plan to satisfy the project specifications

Monitoring and Controlling: Those processes required to track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes.

Closing: Those processes performed to finalize all activities across all Process Groups to formally close the project or phase.

Knowledge areas^[edit]

The ten *knowledge areas*, each of which contains some or all of the project management processes, are:

Project Integration Management : the processes and activities needed to identify, define, combine, unify, and coordinate the various processes and project management activities within the *project management process groups*.

Project Scope management : the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.

Project Schedule management : the processes required to manage the timely completion of the project. Until the 6th edition of the *PMBOK Guide* this was called "Project Time Management"

Project Cost Management : the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget.

Project Quality Management : the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken.

Project Resource Management : the processes that organize, manage, and lead the project team. Until the 6th edition of the *PMBOK Guide* this was called "Project Human Resource Management"

Project Communications Management : the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.

Project Risk Management : the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project.

Project Procurement Management : the processes necessary to purchase or acquire products, services, or results needed from outside the project team. Processes in this area include Procurement Planning, Solicitation Planning, Solicitation, Source Selection, Contract Administration, and Contract Closeout.

Project Stakeholder Management : the processes required to identify all people or organizations impacted by the project, analyzing stakeholder expectations and impact on the project, and developing appropriate management strategies for effectively engaging stakeholders in project decisions and execution.

Each of the ten knowledge areas contains the processes that need to be accomplished within its discipline in order to achieve effective project management. Each of these processes also falls into one of the five process groups, creating a matrix structure such that every process can be related to one knowledge area and one process group.

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

Note that the Facilities Manager may be in the role of Business Analyst since they may represent the end users.

<https://www.villanovau.com/resources/project-management/project-team-roles-and-responsibilities/#.W9-wpZNKhhE>

Project Team Roles and Responsibilities

By Bisk

Successful projects are usually the result of careful planning and the talent and collaboration of a project's team members. ~~Projects can't move forward without each of its key team members, but it's not always clear who those members are, or what roles they play.~~ Here, we'll describe five roles – project manager, project team member, project sponsor, executive sponsor and business analyst – and describe their associated duties.

Project Manager

The project manager plays a primary role in the project, and is responsible for its successful completion. The manager's job is to ensure that the project proceeds within the specified time frame and under the established budget, while managing relationships with contributors and stakeholders.

Project manager duties:

- Develop a project plan
- Manage deliverables according to 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

Project Team Member

Project team members are the individuals who actively work on one or more phases of the project. They may be in-house staff or external consultants, working on the project on a full-time or part-time basis. Team member roles can vary according to each project.

Project team member duties may include:

- Contributing to overall project objectives
- Completing individual deliverables
- Providing expertise
- Working with users to establish and meet business needs
- Documenting the process

Project Sponsor

The project sponsor is the driver and in-house champion of the project. They are typically members of senior management – those with a stake in the project's outcome. Project sponsors work closely with the project manager. They legitimize the project's objectives and participate in high-level project planning. In addition, they often help resolve conflicts and remove obstacles that occur throughout the project, and they sign off on approvals needed to advance each phase.

Project sponsor duties:

- 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

The executive sponsor is ideally a high-ranking member of management. He or she is the visible champion of the project with the management team and is the ultimate decision-maker, with final approval on all phases, deliverables and scope changes.

Executive sponsor duties typically include:

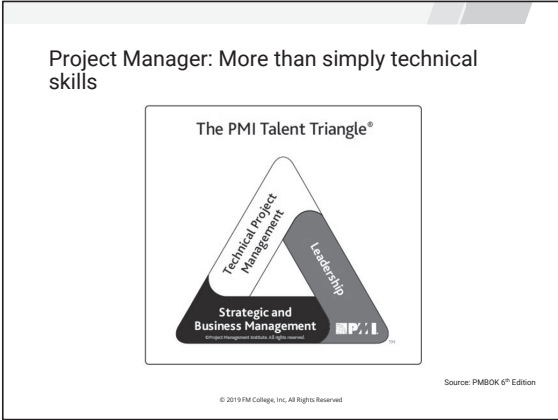
- Carry ultimate responsibility for the project
- Approve all changes to the project scope
- Provide additional funds for scope changes
- Approve project deliverables

Business Analyst

The business analyst defines needs and recommends solutions to make an organization better. When part of a project team, they ensure that the project's objectives solve existing problems or enhance performance, and add value to the organization. They can also help maximize the value of the project deliverables.

Business analyst duties:

- 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



- will act as champion for the project.
- 3. Subject matter experts:** The subject matter expert may be user or client who has specific knowledge, expertise, or insight in a specific functional area.
- 4. Technical Expert:** Technical expert is needed to provide a technical solution to organization problems.

<http://www.ques10.com/p/4279/what-is-project-what-are-the-attributes-of-project/>

A **project** can be defined as a temporary endeavour undertaken to accomplish a unique product, services or results.

Project can be sequences of task which is planned from beginning to end bounded by time, resources, and required result.

The Following are the attributes of Project:

- a. Time frame:** Because a project is a temporary endeavour, it must have a definite beginning and end. Many projects begin on a specific date and the date of completion is estimated. Some project has an immovable date when the project must be completed.
- b. Purpose:** An IT Project can produce any number of results such as a system, a software package, or a recommendation based on a study. Therefore a project's goal must be to produce something tangible and of value to the organization. A Project must have a goal to drive the project in terms of defining the work to be done.
- c. Ownership:** The project must provide something of value to an individual or group who will own the project product after it is completed. Determining who owns this project is not always easy. For example, different groups may fight over the does and does not own the system, the data, the support, and the final cost of implementing and maintaining the system.
- d. Resources:** IT project require time, money, people, and technology. Resources provide the means for achieving a project's goal and also act as a constraint. For example, the project's scope, or work to be accomplished is determined directly by the project's goal. If project sponsor asks that an additional feature to be added to the system, however, this will required additional resources in terms of more work on the part of project team.
- e. Roles:** IT Projects require different individuals with different skills set, they are listed below.
 - 1. Project Manager:** She/he is responsible for ensuring that all of the project management and technical development processes are in place and being carried out properly.
 - 2. Project sponsor:** The project sponsor may be the client, customer, or organizational resources manager who



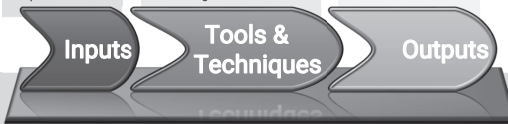
MODULE 03-E
STARTING PROJECTS

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

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Develop Project Charter

<ol style="list-style-type: none"> 1. Business Documents <ul style="list-style-type: none"> • Business case 2. Agreements 3. Enterprise environmental factors 4. Organizational process assets 	<ol style="list-style-type: none"> 1. Expert judgement 2. Data gathering <ul style="list-style-type: none"> • Brainstorming • Focus groups • Interviews 3. Interpersonal & team skills <ul style="list-style-type: none"> • Conflict management • Facilitation • Meeting management 4. Meetings 	<ol style="list-style-type: none"> 1. Project charter 2. Assumption log
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Project Inputs

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Business Case

From Strategic/Tactical Planning

- Market demand
- Organizational need
- Customer request
- Technological advance
- Legal requirement
- Ecological impacts
- Social need

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Agreements

Relevant documents

- Contracts
- Memorandums of understanding (MOUs)
- Service level agreements (SLA)
- Letters of agreement
- Letters of intent
- Verbal agreements
- Email
- Other written agreements

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Enterprise Environmental Factors

Factors that can influence

- Government or industry standards
- Legal & regulatory
- Marketplace conditions
- Organizational culture and political climate
- Organizational governance framework
- Stakeholders expectations & risk thresholds

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Organizational Process Assets

Assets that can influence

- Organizational policies, processes & procedures
- Portfolio, program & project governance framework
- Monitoring & reporting methods
- Templates, etc. (i.e. Project Charter)
- Historical information and lessons learned

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2

Tools & Techniques

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Expert Judgement

Expertise, specialized knowledge and/or training

- Organizational strategy
- Benefits management
- Technical knowledge of industry/focus area
- Schedule & budget estimation
- Risk identification

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Data Gathering

Techniques (examples)

- Brainstorming
- Focus groups
- Interviews

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Interpersonal & Team Skills

Skills examples

- Conflict management
- Facilitation
- Meeting management

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Meetings

Held with key stakeholders

- Project objectives
- Success criteria
- Key deliverables
- High-level requirements
- Summary milestones
- Other information

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Outputs

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Project Charter

- Project purpose
- Measurable project objectives & success criteria
- High-level requirements
- High-level project description, boundaries, and key deliverables
- Overall project risk
- Summary milestone schedule
- Preapproved financial resources
- Key stakeholder list
- Project approval requirements (success, who decides & who approves)
- Project exit criteria
- Assigned PM. Responsibility & authority
- Sponsor authorizing charter

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Assumption log

Log will be initiated here, but maintained throughout the project:

- High level strategic and operational assumptions and constraints from business case
- Lower level activity and task assumptions and constraints generated throughout the project
 - Technical specifications
 - Estimates
 - Risks
 - Etc.
- All other known assumptions and constraints

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THANK YOU

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