



Portfolio-Engineering

the right projects, done right

Introduction to Project Management

Key Terms, Structure and Context

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Introduction to Project Management

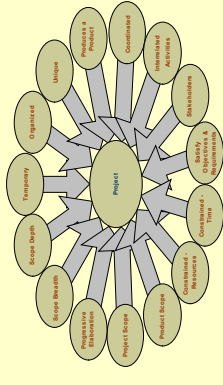
Objectives

- To define “project” and understand the distinctive attributes of a project
- To define “project management” and understand its uniqueness as a management discipline
- To review the role of the project manager, project team and project sponsor

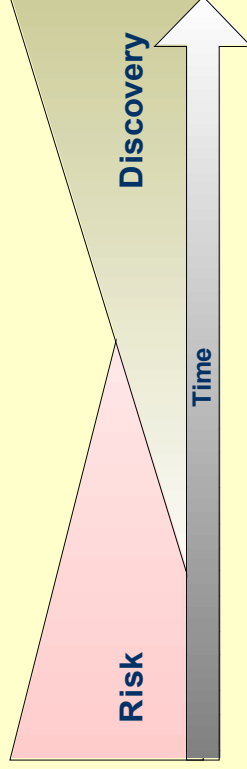


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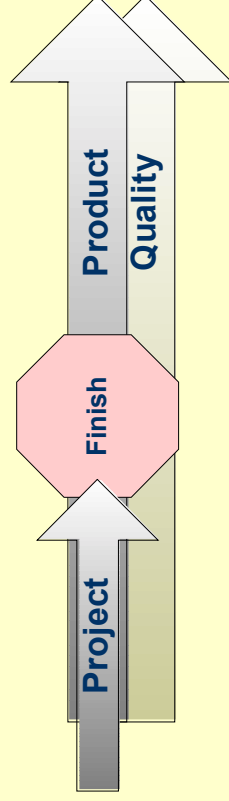
Project Attributes



- **Unique** (i.e. do it one time)
 - Given to risk and discovery (i.e. uncertainty)



- **Produces a Product** (or service, process or plan)
 - Product (and its quality) lives on beyond the project (lasting result)



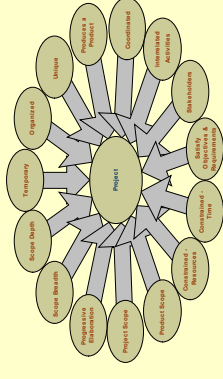
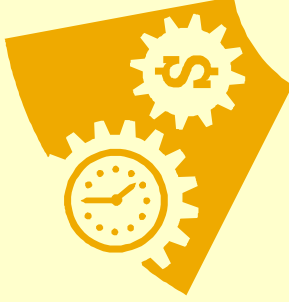
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Project Attributes

- **Constraints – Time**
 - Window of opportunity, requirements, fast velocity

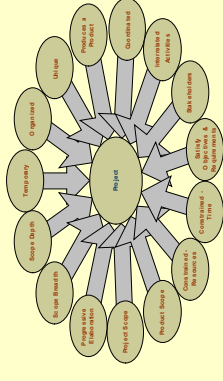


- **Constraints – Resources (Budget and People)**

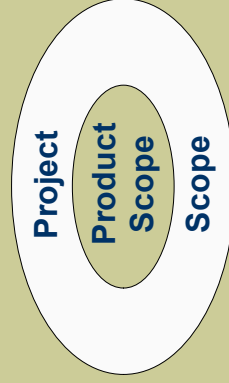


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Project Attributes



- **Product Scope**
 - The quantitative and qualitative features and functions that characterize the product or service being produced
- **Project Scope**
 - The total work that must be done to appropriately manage the project (project management) and to deliver the product scope

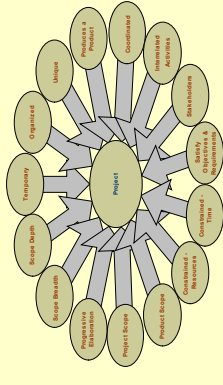


The project scope is completely dependant on and interrelated to the product scope.
Product scope is always included in statements of project scope if only by inference.



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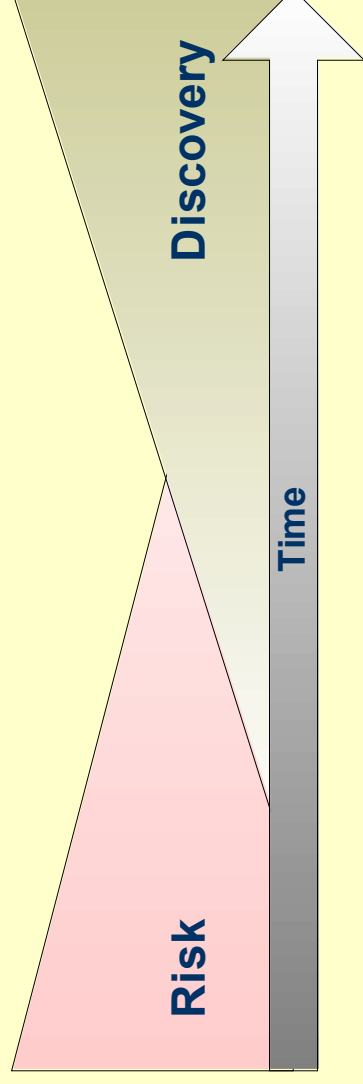
Project Attributes



- **Progressive Elaboration**
 - The gradual discovery and definition of product details and project complexities that are gained throughout project execution. The result of the integration of the unique and temporary characteristics of projects.

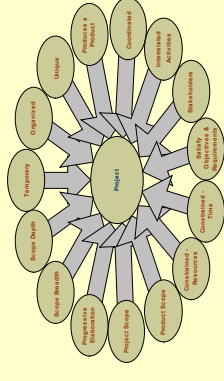
Uncertainty:

- Total work
- Methods
- Durations
- Costs
- Issues
- Product details

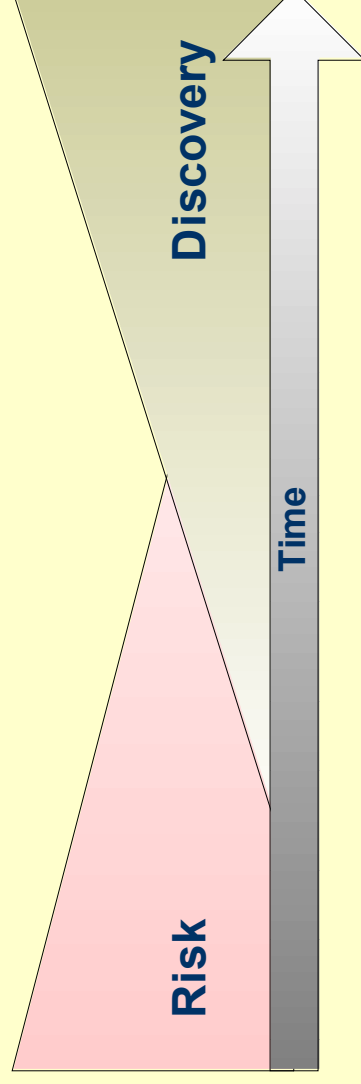


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Project Attributes

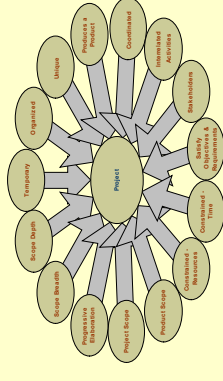


- **Progressive Elaboration**
 - At project launch (project planning), the team has only a broad definition of the project scope (scope breadth) and **uncertainty (risk) is at its highest**
 - During **project execution** the product and project scope becomes more explicit and detailed as the project team **develops understanding** and solves problems (scope depth)
 - All is known about the product and the project only at **project closure** when lessons learned are documented for future project teams

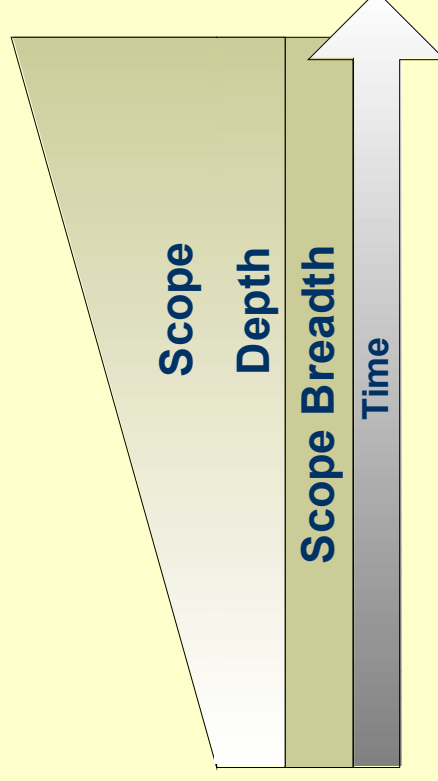


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Project Attributes

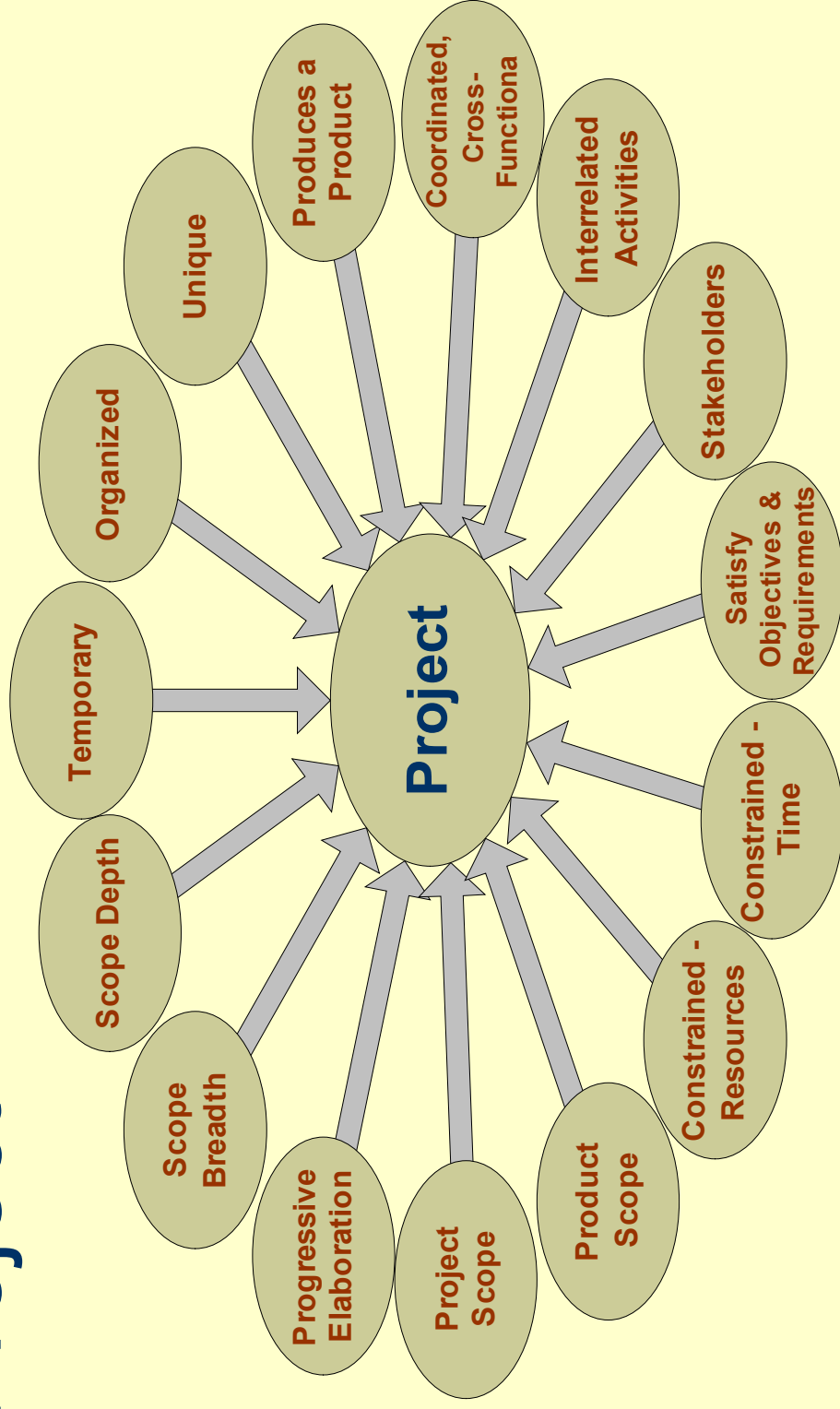


- **Scope Breadth**
 - The original definition of the work to be done by the project as recorded, authorized and baselined during project planning
 - This scope should remain constant
 - Includes all of the deliverables expected from the project
 - Does not specify their exact content, complexity or size



Introduction to Project Management

Project



Conflicting Project Attributes

The triad of alternatives, also called the project triangle, highlights the three primary, integrated and conflicting project objectives.

Scope can be said to include quality and risk.
Cost includes resources and people.



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Project Management

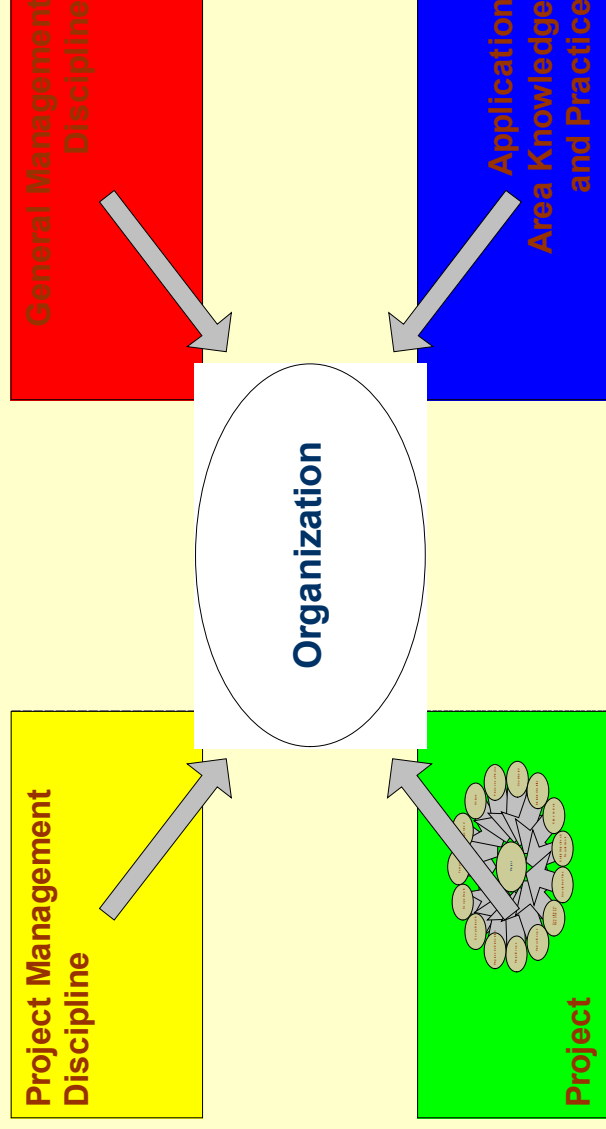
An emerging discipline (standardized in the Project Management Institute (PMI) ANSI-standard "A Guide to the Project Managed Body of Knowledge (PMBOK)") that can be applied to most projects most of the time to ensure consistent success.



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Project Management

The fusion of several management disciplines, each adapted to the sponsoring organization culture, to successfully execute projects.



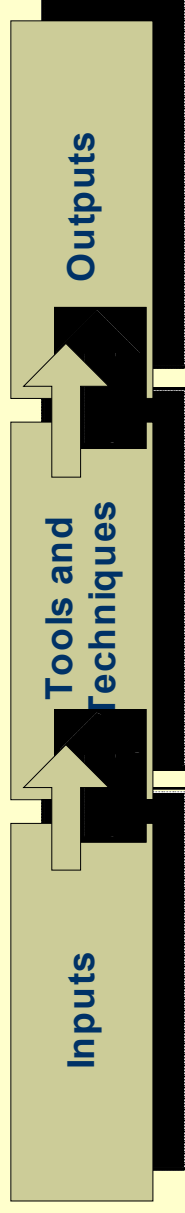
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Project Management Discipline

Project Management
Discipline

PMI's PMBOK defines project management as **39 well-defined processes**. All are needed. Each process is performed when and as often as is needed and is **structured as**:

- **Inputs** – documents, information and events that trigger and feed the process
- **Tools and Techniques** – project management methodologies and systems to accomplish the work
- **Outputs** – documents, decisions and information determined by the process

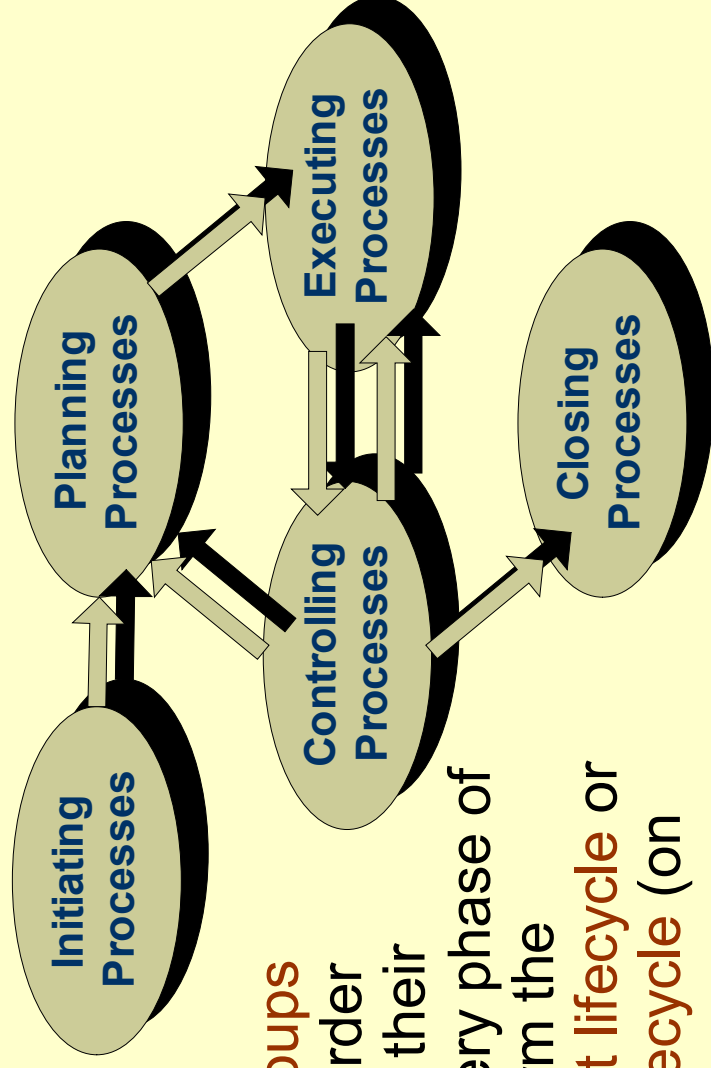


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Project Management Discipline

Project Management
Discipline

The 39 PMBOK processes are organized in two ways. First, each process is part of one of 5 process groups that have a logical order and are executed in their entirety once for every phase of a project. These form the **project management lifecycle** or the **project phase lifecycle** (on complex projects).



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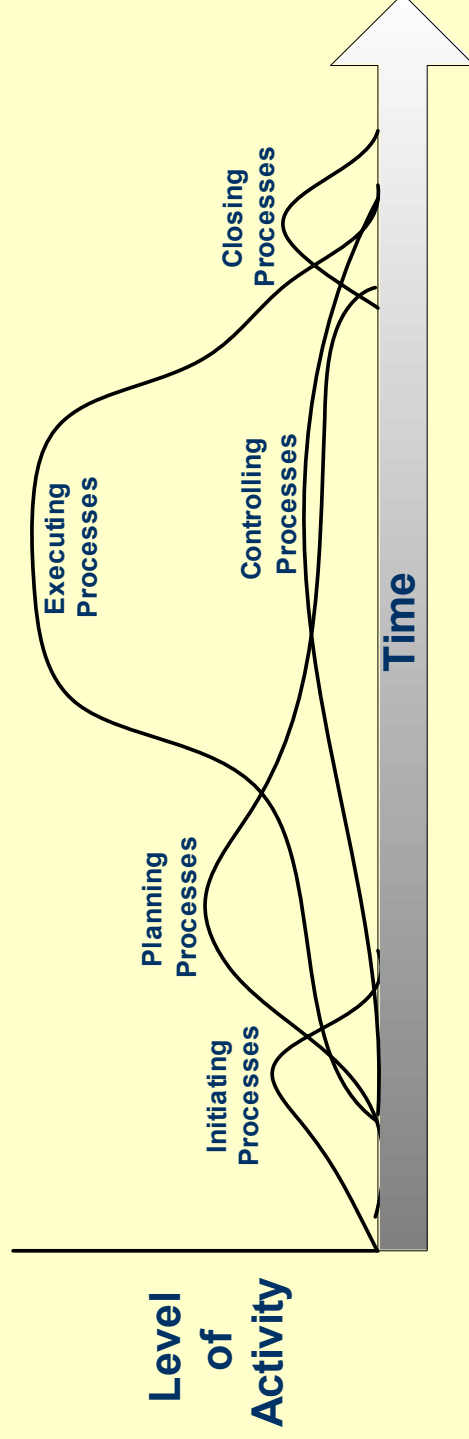


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Project Management Discipline

Project Management
Discipline

The 5 process groups are not discrete, one-time events. They are **over-lapping activities** that occur at **varying levels of intensity** throughout each phase of the project.



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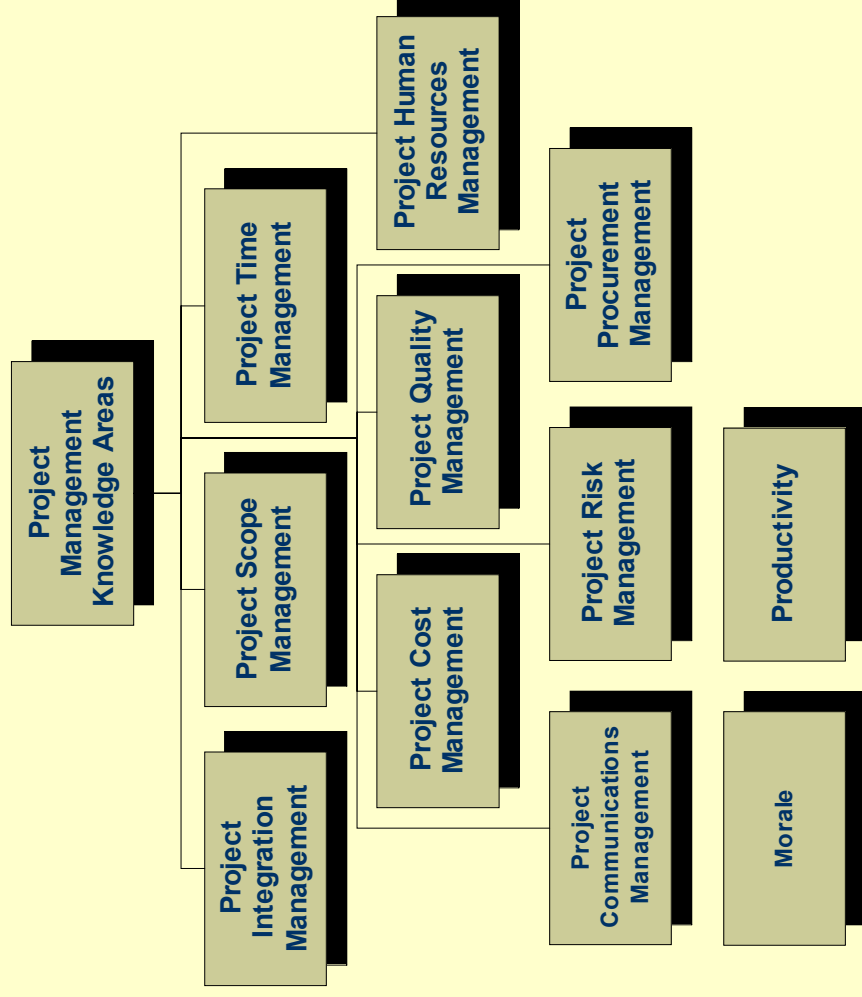
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Project Management Discipline

PMBOK processes are also organized as **9 knowledge areas** that together make up the project management discipline.

Portfolio-Engineering add **morale** and **productivity**.

Project Management Discipline



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Introduction to Project Management

General Management Discipline

General Management
Discipline

Art
(Leadership,
People)

Science
(Techniques,
Methodologies)

General Management Skills

Leading

- Self-confidence
- Action oriented
- Vision
- Direction
- Delegation
- Facilitating
- Alignment
- Motivation
- Inspiration
- Interpersonal skills
- Team building
- Coaching

Communicating

- Formal
- Vertical and horizontal
- Strategic and tactical
- Clear and complete (detail oriented)
- Written and oral
- Internal and external
- Media, models, styles and technique

Negotiating

- Scope / statement of work
- Bringing to terms
- Contracting / contract administration
- Assignments
- Building commitment

Problem Solving

- Identifying and analyzing problems
- Creativity and flexibility in approach
- Identifying and evaluating alternatives
- Making or obtaining timely decisions
- Computer-assisted tools
- Conflict management

Influencing the Organization

- Understanding strategic business implications
- Persuasive, effective in getting things done
- Understanding politics (positive and negative)
- Navigating cross-functional organizations
- Networking and building relationships

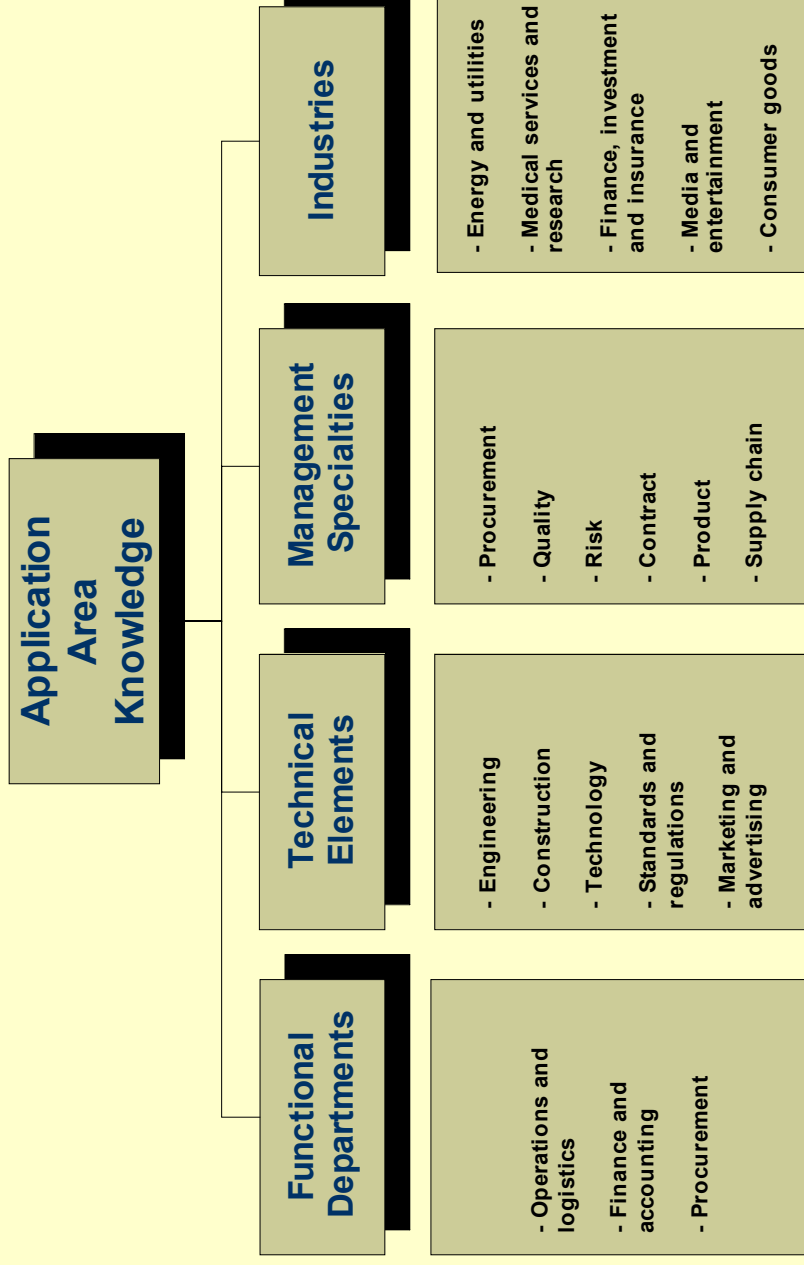
Other Specialties

- Strategic Planning
- Organizational development (staffing)
- Human resources / people
- Personal time management and organization
- Personal integrity and ethics
- Customer recruitment / relations

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Application Area Management Discipline

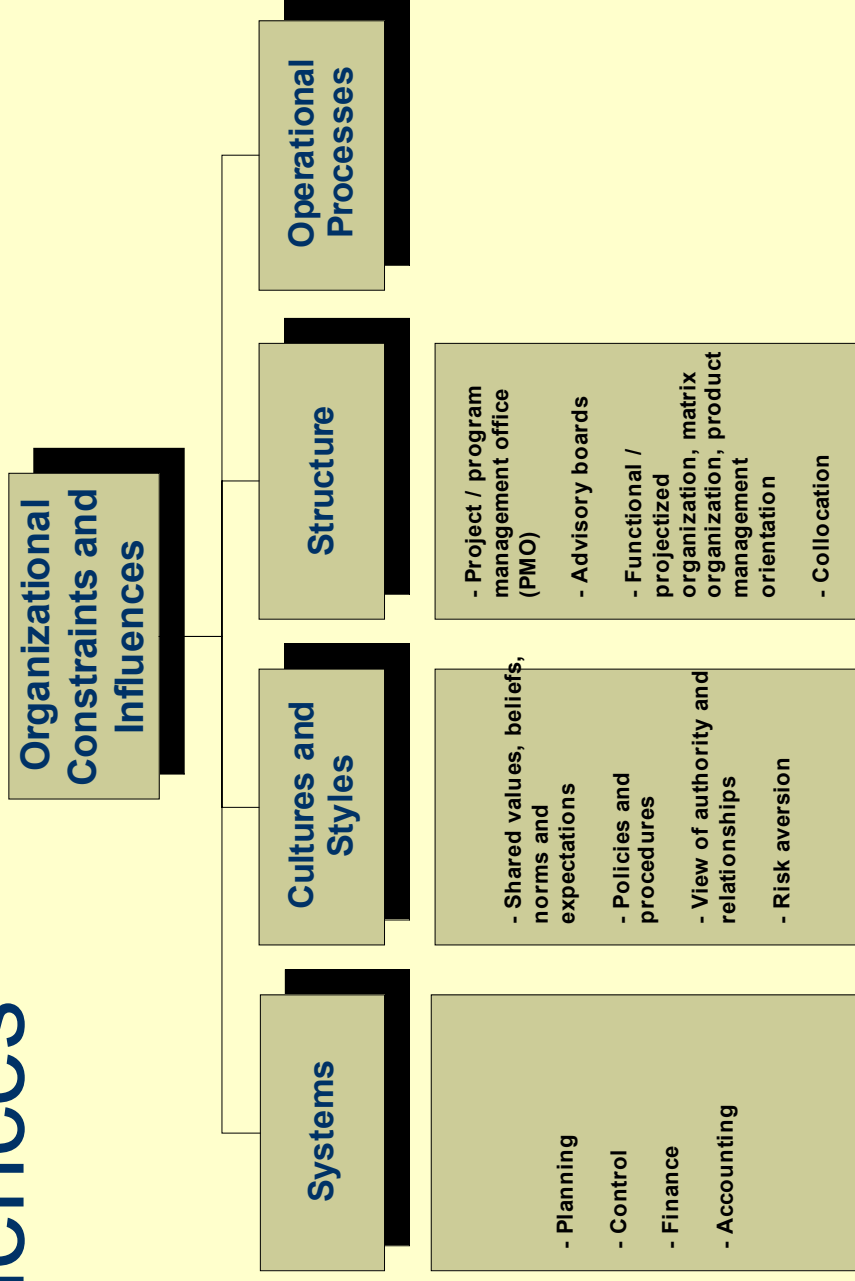
Application
Area Knowledge
and Practice



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Organizational Constraints and Influences

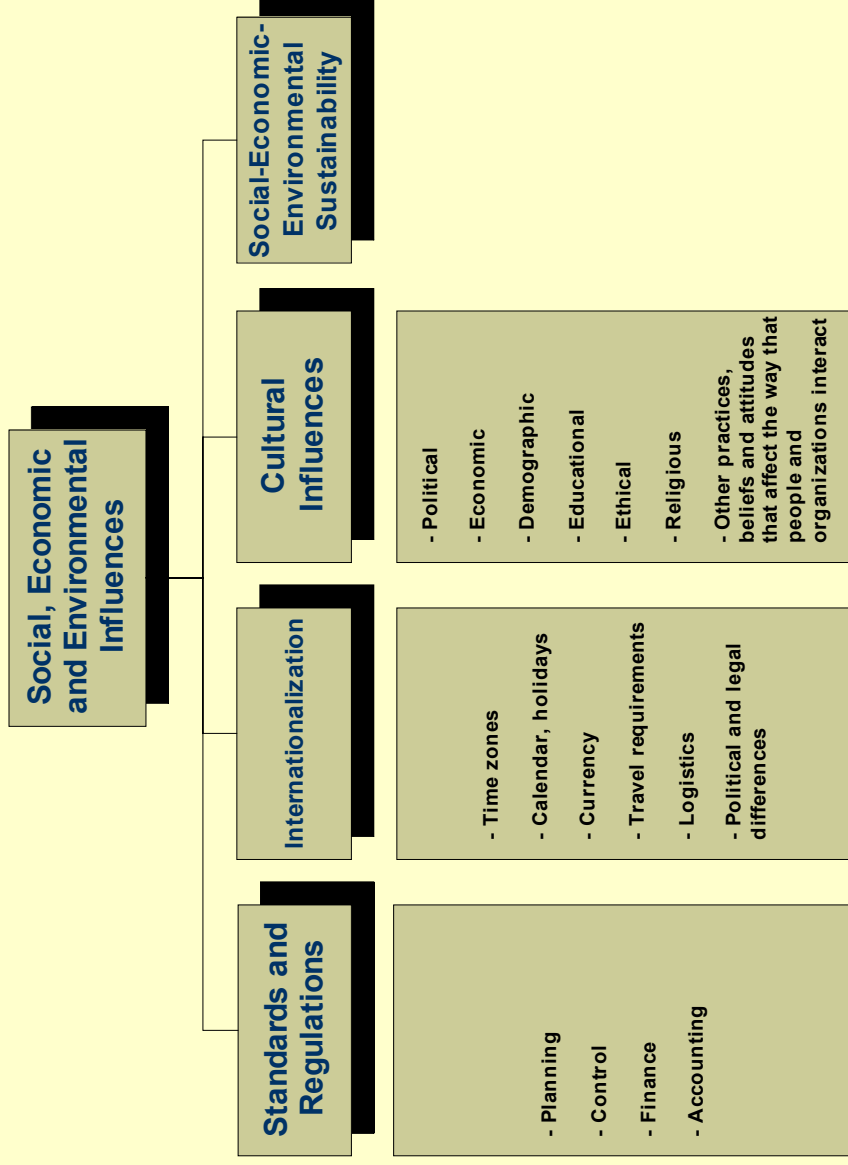
Organization



Introduction to Project Management Social, Economic and

Environmental Influences

Organization

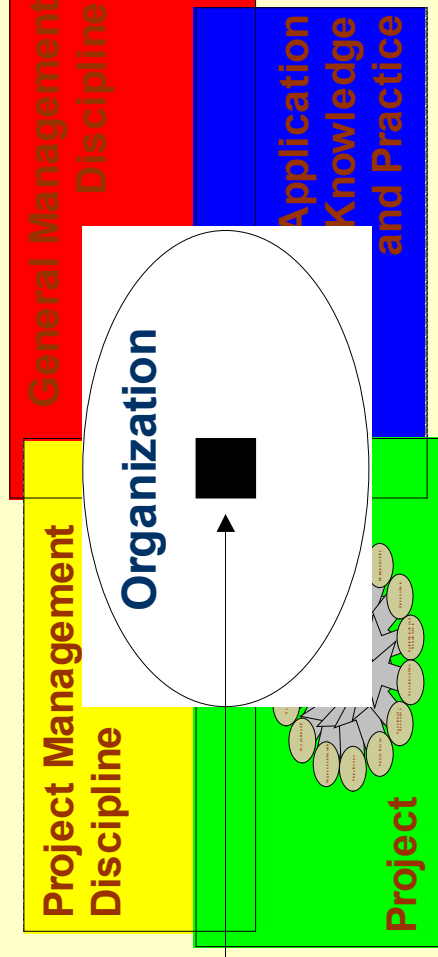


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Project Management

The application of project management, general management and application area specific knowledge, skills, tools and techniques to a project, within the constraints, culture and style of the sponsoring organization, in order to satisfy stakeholder needs and expectations.

Project Management

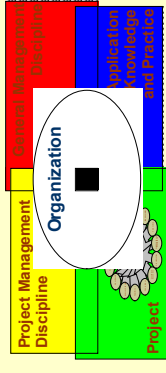


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Project Management

As a compliment PMI's 9 knowledge areas, there are a few **management specializations** that are unique or vital to successful project management:

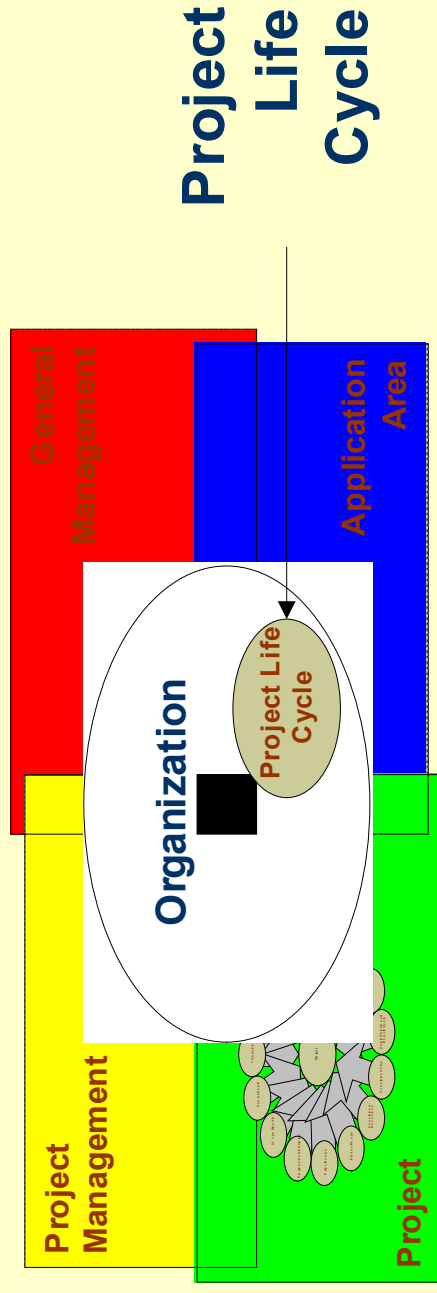
- Project Life Cycle
- Organizational Structure
- Stakeholder Management
- Management by Objectives
- Configuration Management



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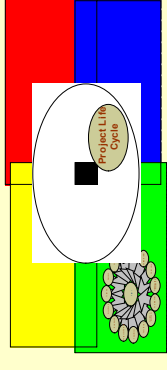
Project Life Cycle

The project life cycle is the **structured approach** or **phases to project execution** that is **unique to a given application area or project** within a **specific organization**.



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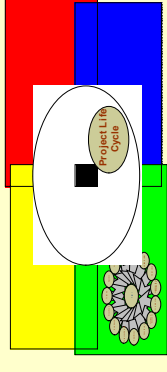
Project Life Cycle



- **Project Life Cycle**
 - Takes a project through phases from **opportunity** to **conclusion** to provide for appropriate management control
 - Is generally very **sequential** (unless fast-tracked)
 - Takes the team through **progressive elaboration**
 - Defines the **project work** and the **roles and responsibilities**
- **Project Life Cycle Phases**
 - Conclude with **tangible deliverables**, inspected to detect and correct errors and omissions, and **formally accepted**
 - May include a **continuance decision gate** between phases

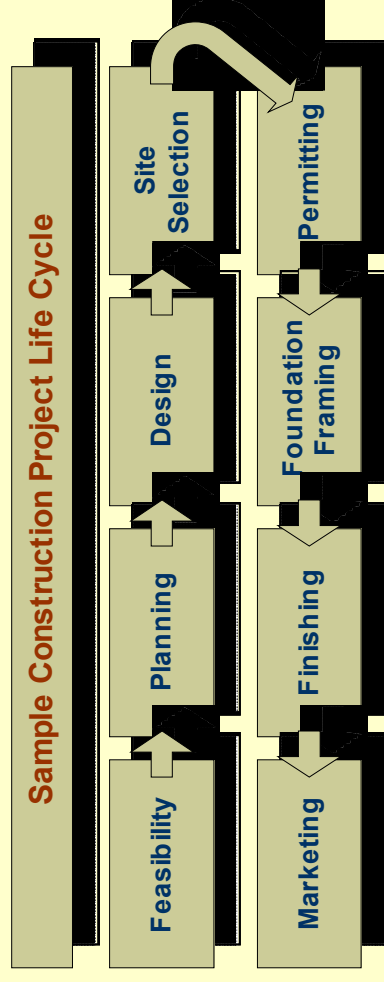
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Project Life Cycle



Types of Project Life Cycles Include:

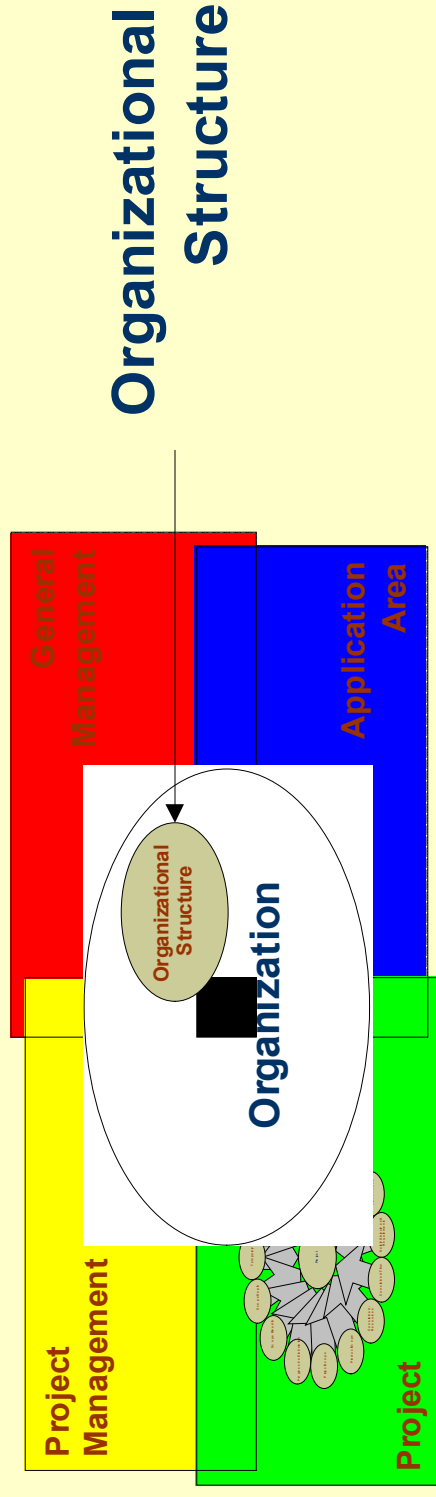
- Defense acquisition
- Software development
- Construction
- Pharmaceuticals
- CRM implementations



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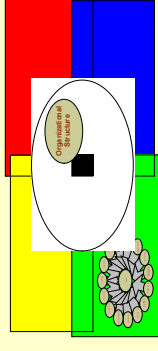
Organizational Structure

The organizational structure is the organization's framework for human resources management that balances functional and project management requirements and strategic and tactical management requirements. Organizational structure relates to the "org. chart", staffing policy and procedure, roles and responsibilities and accountability and authority.



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Organizational Structure



Project Characteristics	Organizational Structure	Functional	Matrix			Projected
			Weak Matrix	Balanced Matrix	Strong Matrix	
Organizational Structure		By Areas of Specialization (Favors Operations)	Matrix Reporting Relationship			By Temporary Projects (or Management by Projects)
Project Manager's Authority		Little or None	Limited	Low to Moderate	Moderate to High	High to Almost Total
Percent of Performing Organization's Personnel Assigned Full Time to Project Work		Virtually None	0 - 25%	15 - 60%	50 - 95%	85 - 100%
Project Manager's Role		Part-time	Part-time	Full-time	Full-time	Full-time
Common Titles for Project Manager's Role		Project Coordinator / Project Leader	Project Coordinator / Project Leader	Project Manager / Project Officer	Project Manager / Program Manager	Project Manager / Program Manager
Project Management Administrative Staff		Part-time	Part-time	Part-time	Full-time	Full-time

Note: Other alternatives include program oriented structures and product oriented structures.

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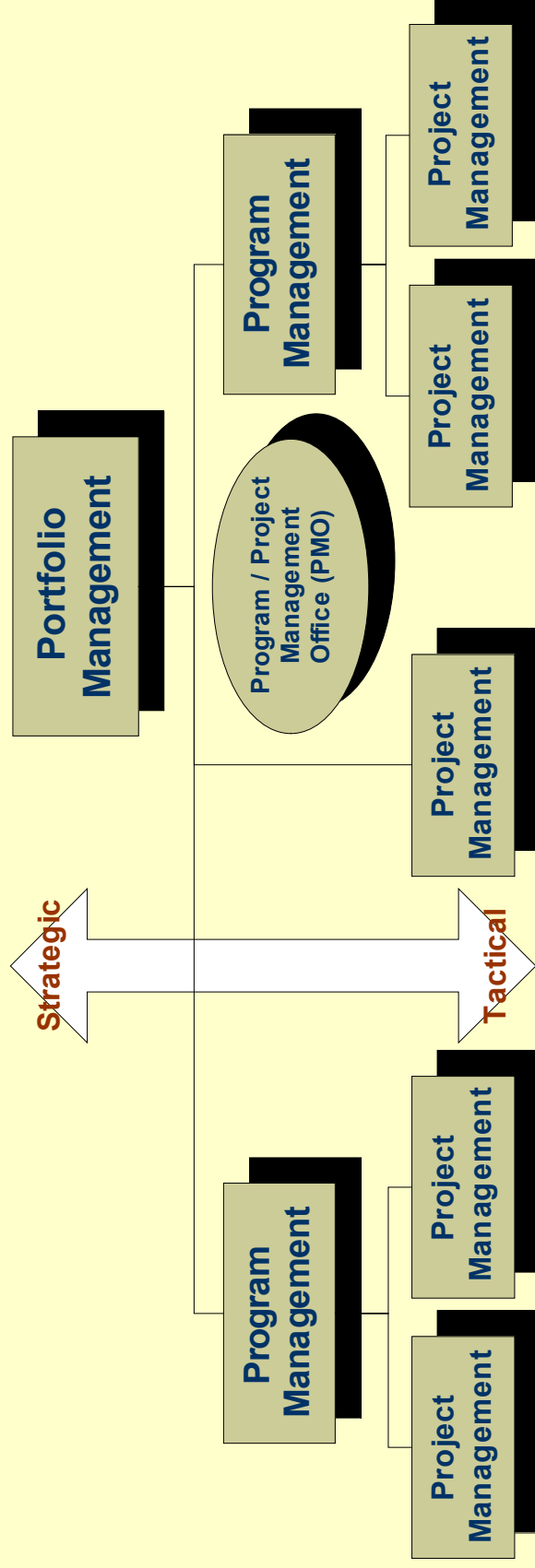
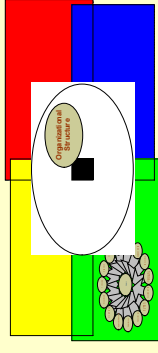
Project and Operations Management Contrasts

	Project Management	Operations Management
Objective	Fulfillment of unique strategic objectives - business change or re-engineering (one time)	Business sustenance and continual improvement - produce similar (often identical) results
Symmetry within Functional Organizations	Complex, horizontal work flow crosses organizational boundaries, exponential communication channels	Aligned, vertical work flow, simple communication flow
Overall Stability	Temporary teams constantly forming and disbanding, uneven resource requirements, considerable uncertainty (risk) in work and career path	On-going, unending, predictable and repetitive work, stable, dedicated organization, clear career path
Project Manager Authority	Indirect (influence) and temporary	Clearly established by org. chart, direct, permanent
Estimates and Budgets	Uncertain, assumption-based estimates, budgets span reporting periods, uneven cash-flow	Estimates based on past performance and improvement targets, budgeting done in cycles to match fiscal calendar and planning models
Constraints	Scope, time and cost (resources)	Departmental budget, continuous improvement



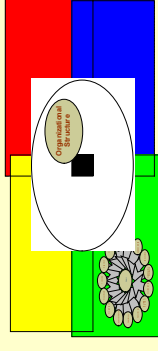
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Organizational Structure



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Organizational Structure

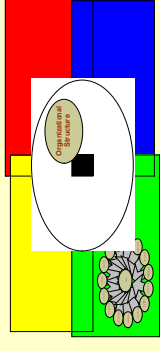


- **Project Management**
 - Management of individual initiatives by dividing them into **multiple phases** (through the **project life cycle**), breaking down the scope (through **WBS**) and managing the **activities** and **inspecting** the deliverables of the work packages
- **Program Management**
 - Managing a group of **highly inter-related projects** (shared objectives or resources, strong interdependencies) or **all departmental projects** in a coordinated way as a program
- **Portfolio Management**
 - Make **strategic project decisions** (project objectives, funding, discontinuation) in a **portfolio management style**, to ensure meeting the strategic plan with the available resources



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Organizational Structure

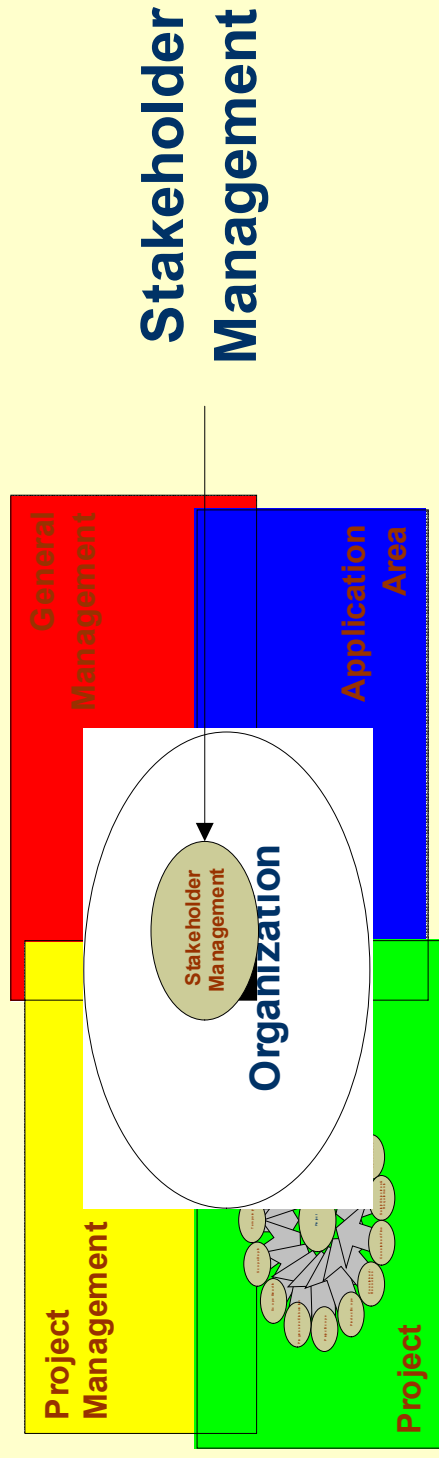


- **Project / Program Management Office (PMO)**
 - A management group with a mandate to manage the **overall objectives of a single complex program** and to coordinate the **inter-related dependencies of the projects** that will contribute to the program, or,
 - A management group responsible for some or all of the following aspects of project management on an **enterprise-wide basis**:
 - Project strategic alignment, prioritization, business case development, financial and performance tracking
 - Project resource management (allocation, productivity)
 - Project management methodology (definition, compliance, software, templates and tools)
 - Project management training, mentoring, audits
 - Management of project managers

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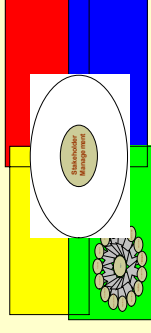
Stakeholder Management

Stakeholder management is an organized approach to managing the people impacted by the project.

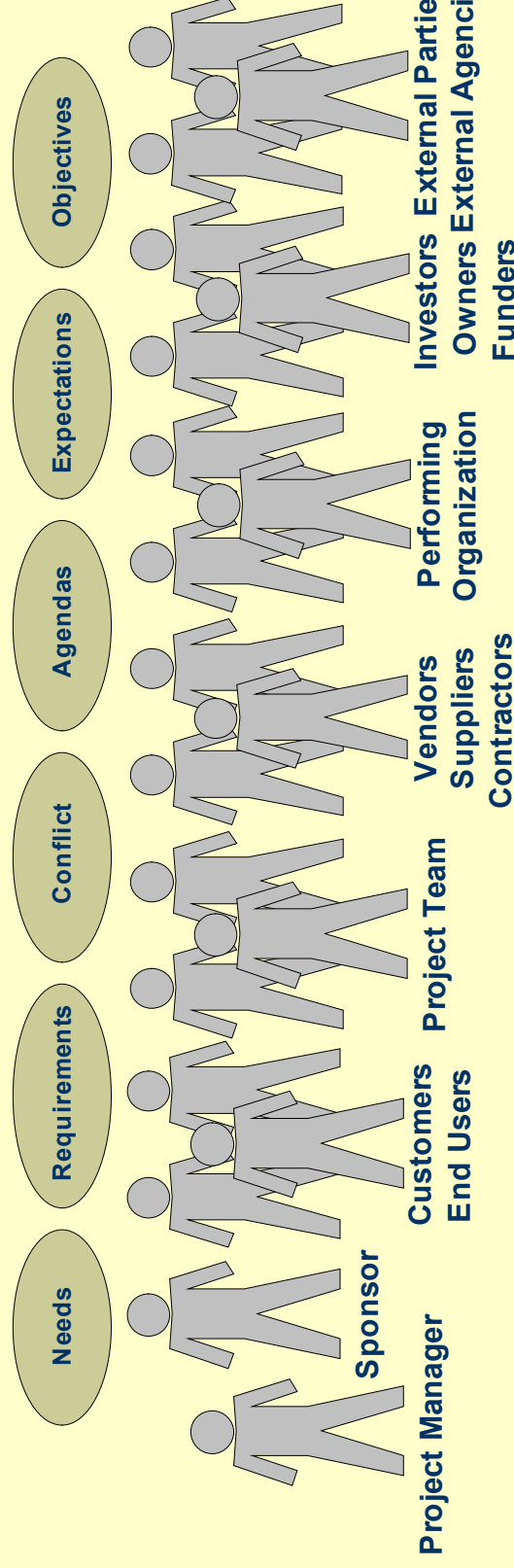


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Stakeholder Management

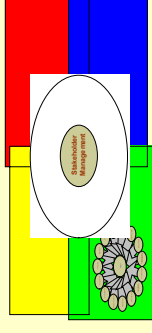


A **stakeholder** is any person or group, including the sponsor, that has a vested interest in, is affected by or can influence the project performance or outcome



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Stakeholder Management



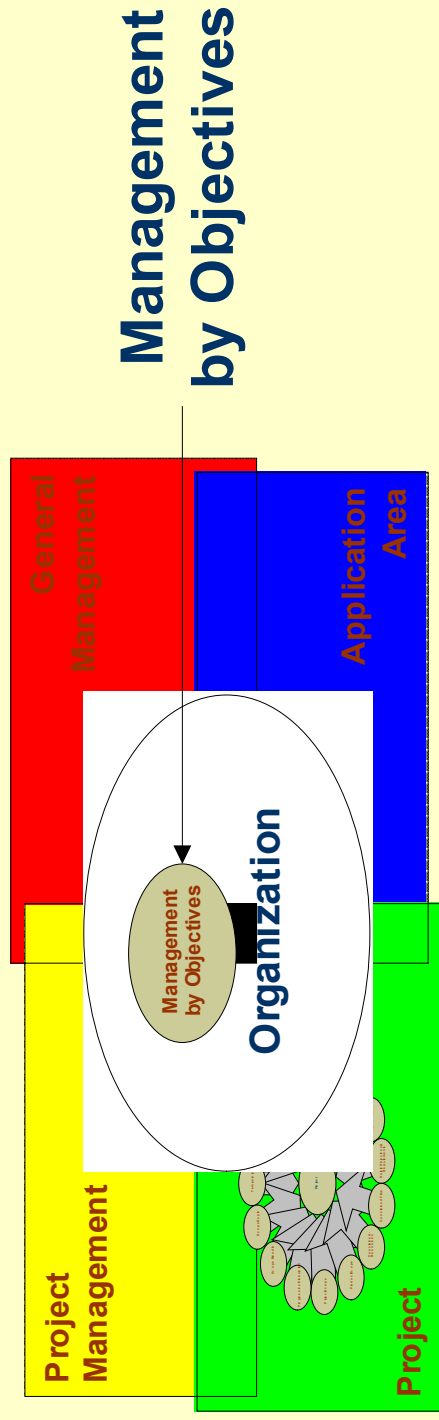
- Stakeholder management includes:
 - Identifying stakeholders
 - Stakeholder analysis (determining their level of organizational influence, project support, needs and expectations)
 - Managing and influencing the stakeholders
- Stakeholder management involves:
 - Surfacing hidden, undocumented objectives and expectations
 - Dealing with objectives conflict (usually resolved in favor of the customer)



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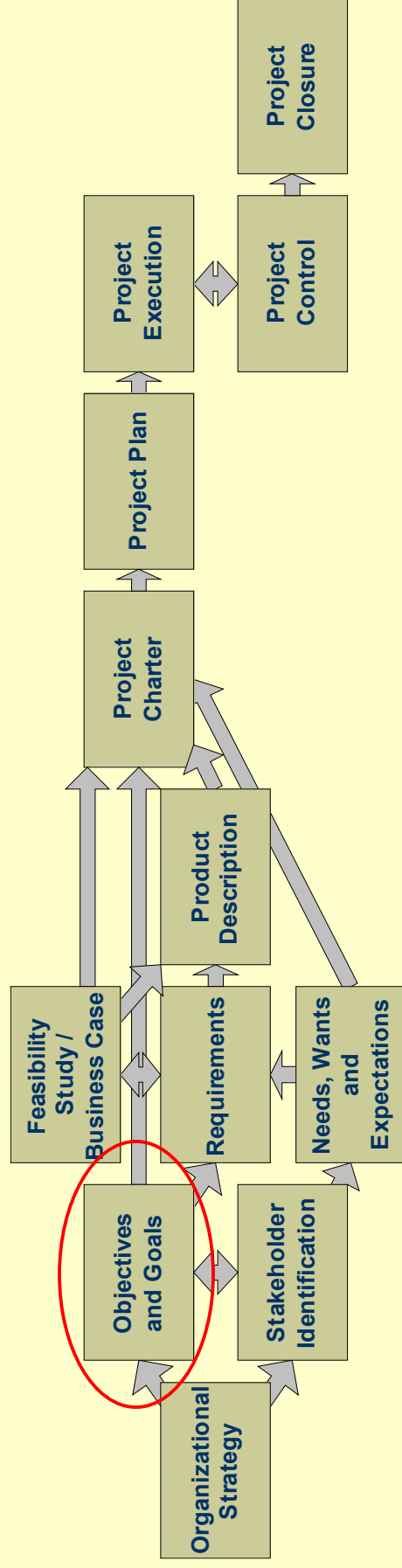
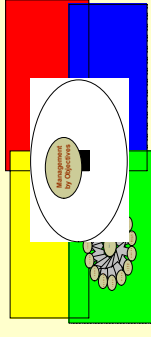
Management by Objectives

A style of management that assures projects are **aligned** with **strategic objectives** and **organizational goals** to ensure support from the top of the organization.



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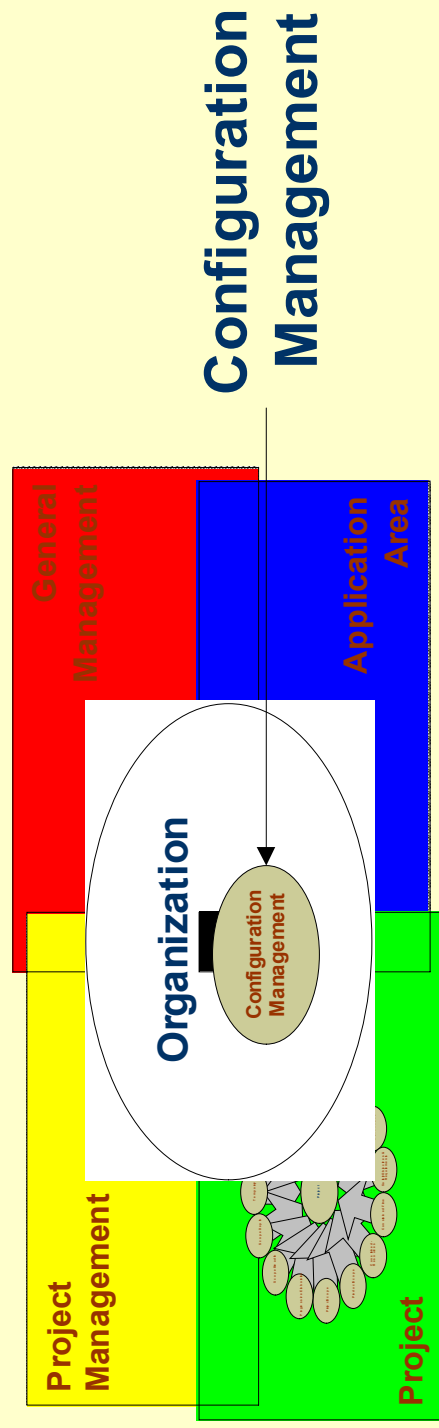
Management by Objectives



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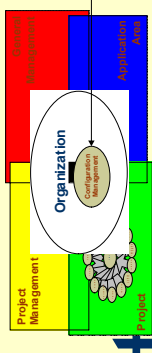
Configuration Management

Configuration management addresses the management of information (including changes) about physical items and processes. By addressing the composition and integration of the project and product documents, configuration management helps to assure safety, quality and delivery against all project objectives.



Introduction to Project Management

Configuration Management



Configuration management as a discipline, encompasses many related disciplines:

- Requirements management
- Change management
- Release management
- Data management
- Records management
- Document control
- Library management

Introduction to Project Management

Project Management Outputs

If the project is managed well, the **output** is always the same:

- The project's products are **delivered** to the customer **on time**
- The customer is **satisfied** with the final deliverables (**meet requirements and acceptance criteria**)
- The project budget has **not been surpassed**
- The team members have **increased their skills** and **knowledge**, team morale remains **high**
- **Significant learnings and project documents** have been **recorded and archived** for reference, particularly by **future project teams**



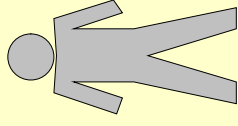
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Introduction to Project Management

Project Manager



Project Manager

The role of the project manager is determined by the **organizational structure** and the **organizational roles & responsibilities**. Project management is not a level, it is a **discipline**.

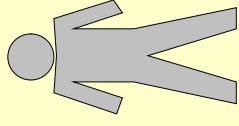
Roles may be defined as:

- **Project Expeditor**
 - Communication coordinator without authority
- **Project Coordinator (Leader)**
 - Reports to a functional manager with some project related authority
- **Project Manager**
 - Absolute authority over all project related matters



Introduction to Project Management

Project Manager



Project Manager

It is essential to note that **authority and accountability** are intrinsically linked and must be appropriately balanced.

In best practice, project managers:

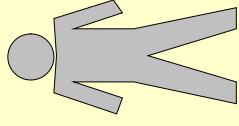
- Have absolute authority (and accountability) over all project matters
- Involve the team in all major decisions

In practice, seldom do project managers have the team reporting directly to them. Instead, project managers learn to manage through influence.

Communication is a project manager's best defense. Perhaps 90% of a project manager's time is spent communicating.

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Project Manager



Project Manager

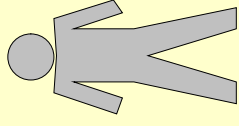
The source of the project manager's authority can include:

- **Positional Power**
 - **Legitimate** – official organizational power
 - **Penalty (Coercive)** – ability to influence negative actions
 - **Reward** – ability to influence positive awards
- **Personal Power**
 - **Expert** – from possessing a unique knowledge or expertise
 - **Referent** – qualities and perception people have toward the project manager



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Project Manager



Project Manager

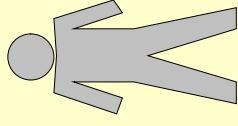
Some responsibilities are defining of the project manager. These cannot be shared or delegated without losing your basis for authority.

- **Interpret project scope, define approach**
- **Lead and facilitate collaborative preparation, commitment to and execution/control of the project plan**
- **Manage and take accountability of project risk, conflict and crisis**
- **Secure resources and resource commitments**
- **Influence, manage and coordinate all stakeholders**
- **Alert management to difficulties outside of your control**
- **Maintain standards, comply with regulations and policies**
- **Organize and chair project reviews**
- **Develop personnel and the team**



Introduction to Project Management

Project Manager



Project Manager

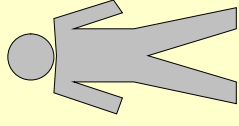
Some responsibilities are not defining of the project manager but are common for the role. These can be shared or delegated to other project team members without losing your basis for authority.

- **Monitor and report progress, problems, alternatives and recommendations – take corrective action**
- **Deliver the project deliverables, see that they are formally accepted**
- **Become a liaison between the sponsor and the customer**
- **Provide technical expertise and direction**



Introduction to Project Management

Project Team



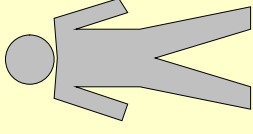
Project Manager

Some responsibilities are to be shared with or delegated to the project team.

- Assist with planning and estimating (expert input)
- Ensure customer satisfaction (project work satisfies requirements and acceptance criteria)
- Manage, control and complete project activities on time, within budget and with certain quality - report on project progress
- Take initiative as required to accomplish the project
- Negotiate commitments regarding project performance, cost and schedule - collect fees
- Fulfill specialized project roles – act as a project liaison with your supervisor



Introduction to Project Management Senior Management, Project / Executive Sponsor



Sponsor / Managers

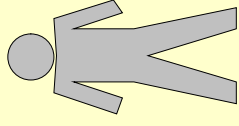
Senior management, and the project / executive sponsor in particular, are primarily responsible for:

- Ensuring the organization has a project management process and project lifecycle that teams can follow
- Translate organizational initiatives into programs and projects - create and authorize project charter to encapsulate vision
- Assure alignment with the business strategy and objectives, meets the needs of the customer and the organization
- Approve overall project plan, budget and schedule - approve major changes to baselined documents
- Assign and empower the project manager - supply / secure organizational resources
- Protect the project from outside influences – remove organizational obstacles – act as a project liaison between management and the project team
- Liaison with the customer's senior management



Introduction to Project Management

Project Manager



Project Manager

Project managers can be certified by PMI with the PMP designation. The PMP certifies that the project manager:

- Has a significant body of actual project management experience
- Has substantial formal training in the project management discipline with exposure to all of the related knowledge areas
- Is obliged to conduct themselves under a formal code of professional conduct



Introduction to Project Management

Next Steps

For additional information, **Portfolio-Engineering** recommends reviewing the following related materials:

- Importance of Project Management
- Snakes and Ladders
- The Theory of Hats
- The Triad of Alternatives
- Initiating Processes Overview
- Introduction to Portfolio Management
- Project Management Office (PMO)
- Management Styles
- Roles and Responsibilities
- Stakeholder Management
- Configuration Management



Introduction to Project Management

Related Exercises

Portfolio-Engineering recommends reviewing the material through the following exercises:

- Introduction to Project Management Quiz
- Project Management Affinity Diagram
- The Project Game
- Project Question Exercise



Introduction to Project Management

Read More About It

- A Guide to the Project Management Body of Knowledge (PMBOK Guide 2000 Edition)
- www.Portfolio-Engineering.com for a graphical, hyperlinked presentation of the PMBOK processes, highlighting the inputs and outputs and dependencies



Introduction to Project Management

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