

Framework for Project Management



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Project Management
Chapter 4: Framework for Project Management

Framework for Project Management

- Project Management as a profession
- The Project Management Institute (PMI)
- Project Management Knowledge Areas
- Project Management Certifications
- Scrum development
- The Project Management Office



Project Management as a Profession

- Body of knowledge
- Standards
- Professional organizations
- Currently, anyone can call him or herself a project manager
- Unresolved issue: to what extent can an expert PM move from one industry to another?



Project Management Standards

- Standards organizations
- PMI
 - Project Management Institute: <http://www.pmi.org/>
 - CAPM, PMP and other professional standards
- IPMA
 - International Project Management Association: <http://ipma.ch/>
 - Several certifications



Project Management Institute (PMI)

- Established in 1969
- Certifications: most popular is PMP
 - Also offer CAPM, for novice PMs, and several specialized certifications
- Currently over 590,000 PMPs in the world
- Have published the ***Project Management Body of Knowledge*** or **PMBOK**, now in its 5th edition.



Project Management Professional (PMP)

- Requirements:
 - 5 years of project management experience
 - pass a rigorous exam
 - maintain ongoing professional development
- Currently over 590,000 PMPs in the world
- The CAPM or Certified Associate in Project Management only requires an exam and is considered to be a step along the way to a PMP



PMBOK Knowledge Areas

- Managing Integration
- Managing Scope
- Managing Time/Schedule
- Managing Costs
- Managing Quality
- Managing Human Resources

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PMBOK Knowledge Areas (continued)

- Managing Communication
- Managing Risks
- Managing Procurement
- Managing Stakeholders



Project Integration

- Very active during the startup
- Coordinates all activities in all other knowledge areas



Project Scope

- Scope generally defines what the project is all about
- Forms the basis of agreement between the project ***SPONSOR*** and the project team
- Changes in the scope may be proposed at any time during a project, but should follow a clearly defined approval process



Scope Statement

- Description of the scope
- Acceptance criteria
- Deliverables
- Exclusions
- Constraints
- Assumptions



Scope and the WBS

- A Work breakdown structure or WBS is the breakdown of the deliverables into manageable units of work.



Schedule and Time Management

- Based on the units of work defined by the WBS
- Resources required are identified
- Time durations are estimated
- Dependencies are identified (such as, what task must be completed before another task can begin)
- And a schedule can be created



Schedule and Time Management

- Several methods are available—details in a later chapter
- Software is frequently used to assist with managing the time schedule



Project Costs

- Develop a budget
 - Several methods can be used to estimate
- Plan for the cash flow
- Track the expenditures
- Explain deviations and make adjustments where required



Project Quality

- Quality plan defines
 - The quality standards
 - The methods that will be used to achieve the standards
 - The methods that will be used to measure the standards



Human Resources

- Identification of HR requirements
- Selection of project team
- Development of project team
- Motivation and management of the project team



Communication

- Communication includes within the team and with others outside the team
- The project should have a communication plan
 - Who needs to be communicated with
 - What methods will be used
 - What frequency
 - Who within the project will be responsible



Risk

- Risk represents the likelihood of the occurrence of an event that will negatively or positively impact the achievement of the project goals
- Processes:
 - Identify risks
 - Analyze risks
 - Manage risks



Procurement

- Contracting to obtain supplies or services required to carry out the project
- May be extremely complex
- Time schedules can be crucial
- On complex projects, almost always involves additional experts such as lawyers



Stakeholder Management

- Stakeholders are people or organizations who either will be impacted by the project or who can impact the project.
- Always include: project sponsor, project team
- May include: customers, suppliers, vendors, the public, land owners, voters, other departments within the organization, government, etc.



Stakeholder Management

- Major tool is the stakeholder register
- Lists stakeholder, role, all communications
- Updated regularly throughout the project
- New stakeholders can appear at any time



PMI Process Groups

- Project Initiating
- Project Planning
- Project Executing
- Project Monitoring and Controlling
- Project Closing



Knowledge Areas (PMBOK 5)

Knowledge Area	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Integration Management	<ul style="list-style-type: none"> Develop Project Charter 	<ul style="list-style-type: none"> Develop Project Management Plan 		<ul style="list-style-type: none"> Monitor and Control Project Work Perform Integrated Change Control 	<ul style="list-style-type: none"> Close Project or Phase
Project Scope Management		<ul style="list-style-type: none"> Plan Scope Management Collect Requirements Define Scope Create WBS 		<ul style="list-style-type: none"> Validate Scope Control Scope 	
Project Time Management		<ul style="list-style-type: none"> Plan Schedule Management Define Activities Sequence Activities Estimate Activity Resources Estimate Activity Durations Develop Schedule 		<ul style="list-style-type: none"> Control Schedule 	
Project Cost Management		<ul style="list-style-type: none"> Plan Cost Management Estimate Costs Determine Budget 		<ul style="list-style-type: none"> Control Costs 	
Project Quality Management		<ul style="list-style-type: none"> Plan Quality Management 	<ul style="list-style-type: none"> Perform Quality Assurance 	<ul style="list-style-type: none"> Control Quality 	



Knowledge Areas (PMBOK 5)

Knowledge Area	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Human Resource Management		<ul style="list-style-type: none"> Plan Human Resource Management 	<ul style="list-style-type: none"> Acquire Project Team Develop Project Team Manage Project team 	<ul style="list-style-type: none"> 	
Project Communications Management		<ul style="list-style-type: none"> Plan Communications Management 	<ul style="list-style-type: none"> Manage Communications 	<ul style="list-style-type: none"> Control Communications 	
Project Risk Management		<ul style="list-style-type: none"> Plan Risk Management Identify Risks Perform Qualitative Risk Analysis Perform Quantitative Risk Analysis Plan Risk Responses 		<ul style="list-style-type: none"> Control Risks 	
Project Procurement Management		<ul style="list-style-type: none"> Plan Procurement Management 	<ul style="list-style-type: none"> Conduct Procurements 	<ul style="list-style-type: none"> Control Procurements 	<ul style="list-style-type: none"> Close Procurements
Project Stakeholder Management	<ul style="list-style-type: none"> Identify Stakeholders 	<ul style="list-style-type: none"> Plan Stakeholder Management 	<ul style="list-style-type: none"> Manage Stakeholder Engagement 	<ul style="list-style-type: none"> Control Stakeholder Engagement 	



Scrum Development Overview

- Known as an Agile method
- Used when requirements are difficult to define or subject to rapid change
- Iterative approach
- Uses **sprints** or 2 to 4 week cycles



Scrum Development Overview

- Roles
 - Product owner
 - Scrum Master
 - Development Team
 - May include specialist roles such as developer, subject matter expert



Scrum Development Overview

- Priorities: stories are either on the:
 - Front burner (currently working on)
 - Back burner (next up)
 - Fridge (for later)
- Priorities are revisited before each new sprint



Scrum Development Overview

- Daily stand-up meeting (short meeting with fixed agenda)
 - What was done yesterday
 - What will be done today
 - Are there any problems the scrum master must address, such as resource issues out of the control of the team



Scrum Development Caveats

- Requires committed, mature developers
- Major work must still be done up front
- Needs commitment and involvement of Product Owner
- Best for products that require frequent updates
- Not so good for large, totally new products that will not allow frequent updates after release



The Project Management Office (PMO)

- Medium and large organizations
- Typical objectives
 - Align projects with organizational objectives
 - Set standards for projects
 - Provide resources to project managers
 - Provide training and mentorship
 - Provide facilitation
 - Stay abreast of best practices in Project Management
 - Repository for project reports and lessons learned



Framework for Project Management

- Project management as a profession
- The Project Management Institute
- Project Management Certifications: PMP, CAPM
- PMBOK overview: ten knowledge areas; five process groups
- Scrum methodology
- The Project Management Office



Questions?



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