

# Project Integration Management

This knowledge area incorporates all the others, requiring project managers to be able to look at project activities from both a tactical, day-to-day viewpoint and a larger, more strategic perspective. It describes the process and activities that integrate the various elements of project management, which are identified, defined, combined, unified and coordinated within the Project Management Process Groups.

4. Project Integration Management	
4.1	Develop Project Charter
4.2	Develop Preliminary Project Scope Statement
4.3	Develop Project Management Plan
4.4	Direct and Manage Project Execution
4.5	Monitor and Control Project work
4.6	Integrated Change Control
4.7	Close Project

Process	Description	Project Phase	Key Deliverables
Develop Project Charter	The derived project charter approves and sanctions the project and gives the project manager the authority to act and apply organizational resources to the project.	Initiating	Project Charter
Develop Preliminary Project Scope Statement	An initial, high-level definition of the project scope. This document defines the project's product or service, methods of approval, and tactical strategies for the change control process.	Initiating	Preliminary Project Scope Statement
Develop Project Management Plan	This plan will be how the project is executed, managed, and monitored and includes all activities needed to create and integrate all subsidiary plans into the Project Management Plan.	Planning	Project Management Plan
Direct and Manage Project Execution	Orchestrating how the project team performs the actions to implement the Project Management Plan and complete the work detailed in the Project Scope Statement.	Execution	Deliverables
Manage and Control Project Work	Measures and balances the project's progress and any corrective or preventative actions needed to assure all project objectives are met.	Control	Requested Changes
Integrated Change Control	The change control process for the project which includes evaluating all change requests, authorizing changes, and managing changes to project plans and deliverables. The key benefit to this process is that only validated approved changes are implemented.	Control	Approved Change Requests
Close Project	Closing the project equates to completing all project activities, delivering the final project, turning over continual support to operations, and obtaining the client approval to formally close the project.	Closure	Final product

References: A Guide to the Project Management Body of Knowledge (PMBOK® Guide) - Third Edition, ©2004 Project Management Institute, Four Campus Boulevard, Newtown Square, PA 19073-3299 USA; and [http://articles.techrepublic.com.com/5100-10878\\_11-1051548.html](http://articles.techrepublic.com.com/5100-10878_11-1051548.html) by Rick Freedman, August 07, 2002

# Project Scope Management

One of a Project Manager’s key roles at the beginning of a project is to ensure that the work and deliverables required to achieve the client’s goals are included in the scope. This knowledge area outlines the process of eliciting scope from clients and their stakeholders, verifying and validating that scope, and closely managing changes to the scope throughout the life of the project.

5. Project Scope Management	
5.1	Scope Planning
5.2	Scope Definition
5.3	Create WBS
5.4	Scope Verification
5.5	Scope Control

Process	Description	Project Phase	Key Deliverables
Scope Planning	Creating a project scope management plan that documents how the project scope will be defined, verified, controlled, and how the work breakdown structure (WBS) will be created and defined	Planning	Scope Management Plan
Scope Definition	Developing a detailed project scope statement as the basis for future project decisions	Planning	Project Scope Statement
Create WBS	Subdividing the major project deliverables and project work into smaller, more manageable components	Planning	WBS, WBS dictionary
Scope Verification	Formalizing acceptance of the completed project deliverables	Control	Acceptance deliverables
Scope Control	Controlling changes to the project scope	Control	Requested Changes

# Project Time Management

The time management knowledge area incorporates all the actions required to ensure that projects are delivered in a timely fashion. From identifying the tasks and activities required to deliver the complete scope, to sequencing them and estimating their duration. Time management requires project managers to develop a clear and realistic schedule of events, and then manage to that schedule.

6. Project Time Management	
6.1	Activity Definition
6.2	Activity Sequencing
6.3	Activity Source Estimating
6.4	Activity Duration Estimating
6.5	Schedule Development
6.6	Schedule Control

Process	Description	Project Phase	Key Deliverables
Activity Definition	Identifying the specific schedule activities that need to be performed to produce the various project deliverables	Planning	Activity List, Milestone list
Activity Sequencing	Identifying and documenting dependencies among schedule activities	Planning	Project Schedule network diagrams
Activity Resource Estimating	Estimating the type and quantities of resources required to perform each schedule activity	Planning	Activity resource requirements, Resource breakdown structure
Activity Duration Estimating	Estimating the number of work periods that will be needed to complete individual schedule activities	Planning	Activity duration estimates, Activity attributes (updates)
Schedule Development	Analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule	Planning	Project Schedule, Schedule model data
Schedule Control	Controlling changes to the project schedule	Control	Performance measurements, Requested changes

# Project Cost Management

To manage the cost equation of projects, the project manager must plan resources, from staffing to equipment and software. They develop a clear estimate of the costs involved, including labor costs, materials, third-party services, and miscellaneous expenses. They can then create a budget that sets expectations for the investment required to achieve the results desired. Finally, a disciplined cost control program is needed so that costs are measured and managed through out the delivery process.

<b>7. Project Cost Management</b>
7.1 Cost Estimating
7.2 Cost Budgeting
7.3 Cost Control

Process	Description	Project Phase	Key Deliverables
Estimating	Developing an approximation of the costs of the resources needed to complete project activities	Planning	Activity Cost Estimates, Cost Management Plan
Cost Budgeting	Aggregating the estimated costs of individual activities or work packages to establish a cost baseline	Planning	Cost Baseline
Cost Control	Influencing the factors that create cost variances and controlling changes to the project budget	Control	Cost Estimates (updates), Cost baseline (updates)

# Project Quality Management

Planning for the quality of the deliverables, from redundancy and disaster-resistance to robustness and speed, is a central function of project and quality management. Quality management functions include the development of a cost/benefit analysis to guide project tradeoffs and compromises. It requires the design of tests and walkthroughs into the project plan, so that quality is addressed throughout the delivery rather than as an after-the-fact “quality review.” A regular inspection, test, sample, and pilot of system elements is required to ensure that they consistently meet the needs and expectations of the client.

<b>8. Project Quality Management</b>
8.1 Quality Planning
8.2 Perform Quality Assurance
8.3 Perform Quality Control

Process	Description	Project Phase	Key Deliverables
Quality Planning	Identifying which quality standards are relevant to the project and determining how to satisfy them	Planning	Quality Management Plan, Quality Metrics, Quality baseline
Perform Quality Assurance	Applying the planned, systematic quality activities to ensure that the project employs all processes needed to meet requirements	Execution	Requested changes
Perform Quality Control	Monitoring specific project results to determine whether they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance	Control	Quality control measurements

# Project Human Resource Management

This knowledge area focuses on the creation of a strategy for attracting, selecting, motivating, and managing all the people involved in the project, from the delivery team to the stakeholders and sponsors. Determining and fulfilling the right organizational structure of a project team is an important factor, as is the ongoing development of team members throughout the project.

<b>9. Project Human Resource Mgmt.</b>
9.1 Human Resource Planning
9.2 Acquire Project Team
9.3 Develop Project Team
9.4 Manage Project Team

Process	Description	Project Phase	Key Deliverables
Human Resource Planning	Identifying and documenting project roles, responsibilities, and reporting relationships, as well as creating the staffing management plan	Planning	Organization Chart, Roles and responsibilities, Staffing Management Plan
Acquire Project Team	Obtaining the human resources needed to complete the project	Execution	Project Staff assignments
Develop Project Team	Improving the competencies and interaction of team members to enhance project performance	Execution	Team performance assessment
Manage Project Team	Tracking team member performance, providing feedback, resolving issues, and coordinating changes to enhance project performance	Control	Requested changes

# Project Communications Management

The creation of a compelling marketing message for the project, the preparation of the user community to accept and embrace the new product, and the keeping of stakeholders and sponsors informed and involved throughout the life of the project are key project success factors but are often compressed or neglected aspects of project management.

10. Project Comm. Management	
10.1	Communications Planning
10.2	Information Distribution
10.3	Performance Reporting Manage Stakeholders

Process	Description	Project Phase	Key Deliverables
Communication Planning	Determining the information and communications needs of the project stakeholders	Planning	Communication Management Plan
Information Distribution	Making needed information available to project stakeholders in a timely manner	Execution	Organization process assets (updates)
Performance Reporting	Collecting and distributing performance information. This includes status reporting, progress measurement, and forecasting	Control	Performance Reports
Manage Stakeholders	Managing communications to satisfy the requirements of and resolve issues with project stakeholders	Control	Resolved issues

# Project Risk Management

The identification of and preparation for risk is a key element of project management. In order to best identify all of the risks facing a project one needs to look beyond just the product and consider organizational and political factors. Together the team should work to rank all identified risks, either through qualitative or quantitative methods, and then decide on how to best mitigate or avoid them.

11. Project Risk Management	
11.1	Risk Management Planning
11.2	Risk Identification
11.3	Qualitative Risk Analysis
11.4	Quantitative Risk Analysis
11.5	Risk Response Planning
11.6	Risk Monitoring and Control

Process	Description	Project Phase	Key Deliverables
Risk Management Planning	Deciding how to approach, plan, and execute the risk management activities for a project	Planning	Risk Management Plan
Risk Identification	Determining which risks might affect the project and documenting their characteristics	Planning	Risk register
Qualitative Risk Analysis	Prioritizing risks for subsequent further analysis or action by assessing and combining their probability of occurrence and impact	Planning	Risk register (updates)
Quantitative Risk Analysis	Numerically analyzing the effect on overall project objectives of identified risks	Planning	Risk register (updates)
Risk Response Planning	Developing options and actions to enhance opportunities, and to reduce threats to project objectives	Planning	Risk related contractual agreements
Risk Monitoring and Control	Tracking identified risks, monitoring residual risks, identifying new risks, executing risk response plans, and evaluating their effectiveness throughout the project lifecycle	Control	Requested changes

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# Project Procurement Management

Most systems projects require the purchase and installation of hardware and software, as well as the use of subcontracted or third-party resources. Procurement management is the art of soliciting those products and services, selecting the best provider and material, and ensuring that contracts are drawn and enforced fairly and effectively. The best-run project can often be derailed by external providers or product availability, so the disciplined management of this element is crucial.

12. Project Procurement Mgmt.	
12.1	Plan Purchase and Acquisitions
12.2	Plan Contracting
12.3	Request Seller Responses
12.4	Select Sellers
12.5	Contract Administration
12.6	Contract Closure

Process	Description	Project Phase	Key Deliverables
Plan Purchases and Acquisitions	Determining what to purchase or acquire and determining when and how	Planning	Procurement Management Plan
Plan Contracting	Documenting products, services, and results requirements and identifying potential sellers	Planning	Contract Statement Of Work, Evaluation Criteria
Request Seller Responses	Obtaining information, quotations, bids, offers, or proposals, as appropriate	Execution	Sellers list, Proposals
Select Sellers	Reviewing offers, choosing among potential sellers, and negotiating a written contract with the seller	Execution	Selected Sellers, Contract
Contract Administration	Managing the contract and relationship between the buyer and seller, reviewing and documenting how the seller is performing or has performed to establish required corrective actions and provide basics for future relationships with the seller, managing contract-related changes and, when appropriate, managing the contractual relationship with the outside buyer of the project	Execution	Contract Changes
Contract Closure	Completing and settling each contract, including the resolution of any items, and closing each contract applicable to the project or a project phase.	Closure	Closed Contracts

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