PMBOK® GUIDE 6TH EDITION
PROCESSES FLOW

Based on the *A Guide to the Project Management Body of Knowledge* (PMBOK® Guide) - Sixth Edition

INITIATING

4.1 INTEGRATION — Develop Project Charter
INPUTS
1. Business documents
2. Agreements
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Interpersonal and team skills
4. Meetings
OUTPUTS
1. Project charter
2. Assumption log

13.1 STAKEHOLDER — Identify Stakeholders
INPUTS
1. Project charter
2. Business documents
3. Project management plan
4. Project documents
5. Agreements
6. Enterprise environmental factors
7. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Data analysis
4. Data representation
5. Meetings
OUTPUTS
1. Stakeholder register
2. Change requests
3. Project management plan updates
4. Project documents updates

PLANNING

5.1 SCOPE — Plan Scope Management
INPUTS
1. Project charter
2. Project management plan
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. Meetings
OUTPUTS
1. Scope management plan
2. Requirements management plan

5.2 SCOPE — Collect Requirements
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Business documents
5. Agreements
6. Enterprise environmental factors
7. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Data analysis
4. Decision making
5. Data representation
6. Interpersonal and team skills
7. Context diagram
8. Prototypes
OUTPUTS
1. Requirements documentation
2. Requirements traceability matrix

5.3 SCOPE — Define Scope
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. Decision making
4. Interpersonal and team skills
5. Product analysis
OUTPUTS
1. Project scope statement
2. Project documents updates

5.4 SCOPE — Create WBS
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Decomposition
OUTPUTS
1. Scope baseline
2. Project documents updates

6.1 SCHEDULE — Plan Schedule Management
INPUTS
1. Project charter
2. Project management plan
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. Meetings
OUTPUTS
1. Schedule management plan

6.2 SCHEDULE — Define Activities
INPUTS
1. Project management plan
2. Enterprise environmental factors
3. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Decomposition
3. Rolling wave planning
4. Meetings
OUTPUTS
1. Activity list
2. Activity attributes
3. Milestone list
4. Change requests
5. Project management plan updates

6.3 SCHEDULE — Sequence Activities
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Precedence diagramming method
2. Dependency determination and integration
3. Leads and lags
4. Project management information system
OUTPUTS
1. Project schedule network diagrams
2. Project documents updates

6.4 SCHEDULE — Estimate Activity Durations
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Analogous estimating
3. Parametric estimating
4. Three-point estimating
5. Bottom-up estimating
6. Data analysis
7. Decision making
8. Meetings
OUTPUTS
1. Duration estimates
2. Basis of estimates
3. Project documents updates

6.5 SCHEDULE — Develop Schedule
INPUTS
1. Project management plan
2. Project documents
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Schedule network analysis
2. Critical path method
3. Resource optimization
4. Data analysis
5. Leads and lags
6. Schedule compression
7. Project management information system
8. Agile release planning
OUTPUTS
1. Schedule baseline
2. Project schedule
3. Schedule data
4. Project calendars
5. Change requests
6. Project management plan updates
7. Project documents updates

7.1 COST — Plan Cost Management
INPUTS
1. Project charter
2. Project management plan
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. Meetings
OUTPUTS
1. Cost management plan

7.2 COST — Estimate Costs
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Analogous estimating
3. Parametric estimating
4. Bottom-up estimating
5. Three-point estimating
6. Data analysis
7. Project management information system
8. Decision making
OUTPUTS
1. Cost estimates
2. Basis of estimates
3. Project documents updates

7.3 COST — Determine Budget
INPUTS
1. Project management plan
2. Project documents
3. Business documents
4. Agreements
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Cost aggregation
3. Data analysis
4. Historical information review
5. Funding limit reconciliation
6. Financing
OUTPUTS
1. Cost baseline
2. Project funding requirements
3. Project documents updates

8.1 QUALITY — Plan Quality Management
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgement
2. Data gathering
3. Data analysis
4. Decision making
5. Data representation
6. Test and inspection planning
7. Meetings
OUTPUTS
1. Quality management plan
2. Quality metrics
3. Project management plan updates
4. Project documents updates

9.1 RESOURCE — Plan Resource Management
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data representation
3. Organizational theory
4. Meetings
OUTPUTS
1. Resource management plan
2. Team charter
3. Project documents updates

9.2 RESOURCE — Estimate Activity Resources
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Bottom-up estimating
3. Analogous estimating
4. Parametric estimating
5. Data analysis
6. Project management information system
7. Meetings
OUTPUTS
1. Resource requirements
2. Basis of estimates
3. Resource breakdown structure
4. Project documents updates

4.2 INTEGRATION — Develop Project Management Plan
INPUTS
1. Project charter
2. Outputs from other processes
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Interpersonal and team skills
4. Meetings
OUTPUTS
1. Project management plan

13.2 STAKEHOLDER — Plan Stakeholder Engagement
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Agreements
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Data analysis
4. Decision making
5. Data representation
6. Meetings
OUTPUTS
1. Stakeholder engagement plan

12.1 PROCUREMENT — Plan Procurement Management
INPUTS
1. Project charter
2. Business documents
3. Project management plan
4. Project documents
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Data analysis
4. Source selection analysis
5. Meetings
OUTPUTS
1. Procurement management plan
2. Procurement strategy
3. Bid documents
4. Procurement statement of work
5. Source selection criteria
6. Make-or-buy decisions
7. Independent cost estimates
8. Change requests
9. Project documents updates
10. Organizational process assets updates

11.1 RISK — Plan Risk Management
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. Meetings
OUTPUTS
1. Risk management plan

11.2 RISK — Identify Risks
INPUTS
1. Project management plan
2. Project documents
3. Agreements
4. Procurement documentation
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Data analysis
4. Interpersonal and team skills
5. Prompt lists
6. Meetings
OUTPUTS
1. Risk register
2. Risk report
3. Project documents updates

11.3 RISK — Perform Qualitative Risk Analysis
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Data analysis
4. Interpersonal and team skills
5. Risk categorization
6. Data representation
7. Meetings
OUTPUTS
1. Project documents updates

11.4 RISK — Perform Quantitative Risk Analysis
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Interpersonal and team skills
4. Representations of uncertainty
5. Data analysis
OUTPUTS
1. Project documents updates

11.5 RISK — Plan Risk Responses
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data gathering
3. Interpersonal and team skills
4. Strategies for threats
5. Strategies for opportunities
6. Contingent response strategies
7. Strategies for overall project risk
8. Data analysis
9. Decision making
OUTPUTS
1. Change requests
2. Project management plan updates
3. Project documents updates

10.1 COMMUNICATIONS — Plan Communications Management
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Communication requirements analysis
3. Communication technology
4. Communication models
5. Communication methods
6. Interpersonal and team skills
7. Data representation
8. Meetings
OUTPUTS
1. Communications management plan
2. Project management plan updates
3. Project documents update

EXECUTING

9.3 RESOURCE — Acquire Resources
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Decision making
2. Interpersonal and team skills
3. Pre-assignment
4. Virtual teams
OUTPUTS
1. Physical resource assignments
2. Project team assignments
3. Resource calendars
4. Change requests
5. Project management plan updates
6. Project documents updates
7. Enterprise environmental factors updates
8. Organizational process assets updates

9.4 RESOURCE — Develop Team
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Colocation
2. Virtual teams
3. Communication technology
4. Interpersonal and team skills
5. Recognition and rewards
6. Training
7. Individual and team assessments
8. Meetings
OUTPUTS
1. Team performance assessments
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Enterprise environmental factors updates
6. Organizational process assets updates

9.5 RESOURCE — Manage Team
INPUTS
1. Project management plan
2. Project documents
3. Work performance reports
4. Team performance assessments
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Interpersonal and team skills
2. Project management information system
OUTPUTS
1. Change requests
2. Project management plan updates
3. Project documents updates
4. Enterprise environmental factors updates

8.2 QUALITY — Manage Quality
INPUTS
1. Project management plan
2. Project documents
3. Organizational process assets
TOOLS & TECHNIQUES
1. Data gathering
2. Data analysis
3. Decision making
4. Data representation
5. Audits
6. Design for X
7. Problem solving
8. Quality improvement methods
OUTPUTS
1. Quality reports
2. Test and evaluation documents
3. Change requests
4. Project management plan updates
5. Project documents updates

4.3 INTEGRATION — Direct and Manage Project Work
INPUTS
1. Project management plan
2. Project documents
3. Approved change requests
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Project management information system
3. Meetings
OUTPUTS
1. Deliverables
2. Work performance data
3. Issue log
4. Change requests
5. Project management plan updates
6. Project documents updates
7. Organizational process assets updates

4.4 INTEGRATION — Manage Project Knowledge
INPUTS
1. Project management plan
2. Project documents
3. Deliverables
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Knowledge management
3. Information management
4. Interpersonal and team skills
OUTPUTS
1. Lessons learned register
2. Project management plan updates
3. Organizational process assets updates

13.3 STAKEHOLDER — Manage Stakeholder Engagement
INPUTS
1. Project management plan
2. Project documents
3. Enterprise environmental factors
4. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Communication skills
3. Interpersonal and team skills
4. Ground rules
5. Meetings
OUTPUTS
1. Change requests
2. Project management plan updates
3. Project documents updates

12.2 PROCUREMENT — Conduct Procurements
INPUTS
1. Project management plan
2. Project documents
3. Procurement documentation
4. Seller proposals
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Advertising
3. Bidder conferences
4. Data analysis
5. Interpersonal and team skills
OUTPUTS
1. Selected sellers
2. Agreements
3. Change requests
4. Project management plan updates
5. Project documents updates
6. Organizational process assets updates

11.6 RISK — Implement Risk Responses
INPUTS
1. Project management plan
2. Project documents
3. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Interpersonal and team skills
3. Project management information system
OUTPUTS
1. Change requests
2. Project documents updates

10.2 COMMUNICATIONS — Manage Communications
INPUTS
1. Project management plan
2. Project documents
3. Work performance reports
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Communication technology
2. Communication methods
3. Communication skills
4. Project management information system
5. Project reporting
6. Interpersonal and team skills
7. Meetings
OUTPUTS
1. Project communications
2. Project management plan updates
3. Project documents updates
4. Organizational process assets updates

CLOSING

4.7 INTEGRATION — Close Project or Phase
INPUTS
1. Project charter
2. Project management plan
3. Project documents
4. Accepted deliverables
5. Business documents
6. Agreements
7. Procurement documentation
8. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. Meetings
OUTPUTS
1. Project documents updates
2. Final product, service, or result transition
3. Final report
4. Organizational process assets updates

MONITORING & CONTROLLING

5.5 SCOPE — Validate Scope
INPUTS
1. Project management plan
2. Project documents
3. Verified deliverables
4. Work performance data
TOOLS & TECHNIQUES
1. Inspection
2. Decision making
OUTPUTS
1. Accepted deliverables
2. Work performance information
3. Change requests
4. Project documents updates

5.6 SCOPE — Control Scope
INPUTS
1. Project management plan
2. Project documents
3. Work performance data
4. Organizational process assets
TOOLS & TECHNIQUES
1. Data analysis
OUTPUTS
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates

6.6 SCHEDULE — Control Schedule
INPUTS
1. Project management plan
2. Project documents
3. Work performance data
4. Organizational process assets
TOOLS & TECHNIQUES
1. Data analysis
2. Critical path method
3. Project management information system
4. Resource optimization
5. Leads and lags
6. Schedule compression
OUTPUTS
1. Work performance information
2. Schedule forecasts
3. Change requests
4. Project management plan updates
5. Project documents updates

7.4 COST — Control Costs
INPUTS
1. Project management plan
2. Project documents
3. Project funding requirements
4. Work performance data
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. To-complete performance index
4. Project management information system
OUTPUTS
1. Work performance information
2. Cost forecasts
3. Change requests
4. Project management plan updates
5. Project documents updates

4.5 INTEGRATION — Monitor and Control Project Work
INPUTS
1. Project management plan
2. Project documents
3. Work performance information
4. Agreements
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Data analysis
3. Decision making
4. Meetings
OUTPUTS
1. Work performance reports
2. Change requests
3. Project management plan updates
4. Project documents updates

4.6 INTEGRATION — Perform Integrated Change Control
INPUTS
1. Project management plan
2. Project documents
3. Work performance reports
4. Change requests
5. Enterprise environmental factors
6. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Change control tools
3. Data analysis
4. Decision making
5. Meetings
OUTPUTS
1. Approved change requests
2. Project management plan updates
3. Project documents updates

13.4 STAKEHOLDER — Monitor Stakeholder Engagement
INPUTS
1. Project management plan
2. Project documents
3. Work performance data
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Data analysis
2. Decision making
3. Data representation
4. Communication skills
5. Interpersonal and team skills
6. Meetings
OUTPUTS
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates

12.3 PROCUREMENT — Control Procurements
INPUTS
1. Project management plan
2. Project documents
3. Agreements
4. Procurement documentation
5. Approved change requests
6. Work performance data
7. Enterprise environmental factors
8. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Claims administration
3. Data analysis
4. Inspection
5. Audits
OUTPUTS
1. Closed procurements
2. Work performance information
3. Procurement documentation updates
4. Change requests
5. Project management plan updates
6. Project documents updates
7. Organizational process assets updates

11.7 RISK — Monitor Risks
INPUTS
1. Project management plan
2. Project documents
3. Work performance data
4. Work performance reports
TOOLS & TECHNIQUES
1. Data analysis
2. Audits
3. Meetings
OUTPUTS
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

10.3 COMMUNICATIONS — Monitor Communications
INPUTS
1. Project management plan
2. Project documents
3. Work performance data
4. Enterprise environmental factors
5. Organizational process assets
TOOLS & TECHNIQUES
1. Expert judgment
2. Project management information system
3. Data representation
4. Interpersonal and team skills
5. Meetings
OUTPUTS
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates

9.6 RESOURCE — Control Resources
INPUTS
1. Project management plan
2. Project documents
3. Work performance data
4. Agreements
5. Organizational process assets
TOOLS & TECHNIQUES
1. Data analysis
2. Problem solving
3. Interpersonal and team skills
4. Project management information system
OUTPUTS
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates

8.3 QUALITY — Control Quality
INPUTS
1. Project management plan
2. Project documents
3. Approved change requests
4. Deliverables
5. Work performance data
6. Enterprise environmental factors
7. Organizational process assets
TOOLS & TECHNIQUES
1. Data gathering
2. Data analysis
3. Inspection
4. Testing/product evaluations
5. Data representation
6. Meetings
OUTPUTS
1. Quality control measurements
2. Verified deliverables
3. Work performance information
4. Change requests
5. Project management plan updates
6. Project documents updates

PMBOK® GUIDE 6TH EDITION – 49 PROJECT MANAGEMENT PROCESSES