



Processes Inputs, Tools & Techniques and Outputs.

04. Project Integration Management

Processes	Inputs	Tools & Techniques	Outputs
1. Develop Project Charter	1. Project Statement of Work 2. Business Case 3. Agreements 4. Enterprise Environmental Factors, 5. Organizational Process Assets	1. Expert Judgment 2. Facilitation Techniques	1. Project Charter
2. Develop Project Management Plan	1. Project Charter 2. Outputs from other processes 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Expert Judgment 2. Facilitation Techniques	1. Project Management Plan
3. Direct and Manage Project Work	1. Project Management Plan, 2. Approved Change Requests 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Project Management Information Systems 2. Expert Judgment 3. Meetings	1. Deliverables 2. Work Performance Data 3. Change Requests 4. Project Management Plan updates 5. Project Documents updates
4. Monitor and Control Project Work	1. Project Management Plan 2. Schedule Forecasts 3. Cost Forecasts 4. Validated Changes 5. Work Performance Information 6. Enterprise Environmental Factors 7. Organizational Process Assets	1. Expert Judgment 2. Analytical Techniques 3. Project Management Information System 4. Meetings	1. Change Requests 2. Work Performance Reports 3. Project Management Plan updates 4. Project Documents updates
5. Perform Integrated Change Control	1. Project Management Plan 2. Work Performance Reports 3. Change Requests 4. Enterprise Environmental Factors 5. Organizational Process Assets	1. Expert Judgment 2. Meetings 3. Change Control Tools	1. Approved Change Requests 2. Change Log 3. Project Management Plan updates 4. Project Documents updates
6. Close Project or Phase	1. Project Management Plan 2. Accepted Deliverables 3. Organizational Process Assets	1. Expert Judgment 2. Analytical Techniques 3. Meetings	1. Final Product, Service or result Transition 2. Organizational Process Assets



05. Project Scope Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Scope Management	1. Project Management Plan 2. Project Charter 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Expert Judgment 2. Meetings	1. Scope Management Plan 2. Requirements Management Plan
2. Collect Requirements	1. Scope Management Plan 2. Requirements Management Plan 3. Stakeholder Management Plan 4. Project Charter 5. Stakeholder Register	1. Interviews 2. Focus Groups 3. Facilitated Workshops 4. Group Creativity techniques 5. Group Decision making techniques 6. Questionnaires and Surveys 7. Observations 8. Prototypes 9. Benchmarking 10. Context Diagrams 11. Document Analysis	1. Requirements Documentation 2. Requirements Traceability Matrix
3. Define Scope	1. Scope Management Plan 2. Project Charter 3. Requirements Documentation 4. Organizational Process Assets	1. Expert Judgment 2. Product Analysis 3. Alternatives Generation 4. Facilitated Workshops	1. Project Scope Statement 2. Project Documents updates
4. Create WBS	1. Scope Management Plan 2. Project Scope Statement 3. Requirements Documentation 4. Enterprise Environmental Factors 5. Organizational Process Assets	1. Decomposition 2. Expert Judgment	1. Scope baseline 2. Project Documents updates
5. Validate Scope	1. Project Management Plan 2. Requirements Documentation 3. Requirements Traceability Matrix 4. Validated Deliverables 5. Work Performance Data	1. Inspection 2. Group decision-making Techniques	1. Accepted Deliverables 2. Change Requests 3. Work Performance Information 4. Project Documents updates
6. Control Scope	1. Project Management Plan 2. Requirements Documentation 3. Requirements Traceability Matrix 4. Work Performance Data 5. Organizational Process Assets	1. Variance Analysis	1. Work Performance Information 2. Change Requests 3. Project Management Plan updates 4. Project Document updates 5. Organizational Process Asset updates



06. Project Time Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Schedule Management	1. Project Management Plan 2. Project Charter 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Expert Judgment 2. Analytical Techniques 3. Meetings	1. Schedule Management Plan
2. Define Activities	1. Schedule Management Plan 2. Scope Baseline 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Decomposition 2. Rolling Wave Planning 3. Expert Judgment	1. Activity List 2. Activity Attributes 3. Milestone List
3. Sequence Activities	1. Schedule Management Plan 2. Activity List 3. Activity Attributes 4. Milestone List 5. Project Scope Statement 6. Enterprise Environmental Factors 7. Organizational Process Assets	1. Precedence Diagramming Method (PDM) 2. Dependency Determination 3. Leads and Lags	1. Project Schedule Network Diagrams 2. Project Documents updates
4. Estimate Activity Resources	1. Schedule Management Plan 2. Activity List 3. Activity Attributes 4. Resource Calendars 5. Risk Register 6. Activity Cost Estimates 7. Enterprise Environmental Factors 8. Organizational Process Assets	1. Expert Judgment 2. Alternatives Analysis 3. Published Estimating data 4. Bottom up Estimating 5. Project management Software	1. Activity Resource Requirements 2. Resource breakdown Structure 3. Project Documents updates
5. Estimate Activity Durations	1. Schedule Management Plan 2. Activity List 3. Activity Attributes 4. Activity Resource Requirements 5. Resource Calendars 6. Project Scope Statement 7. Risk Register 8. Resource Breakdown Structure 9. Enterprise Environmental Factors 10. Organizational Process Assets	1. Expert Judgment 2. Analogous Estimating 3. Parametric Estimating 4. Three-point Estimates 5. Group decision-making Techniques 6. Reserve Analysis	1. Activity Duration Estimates 2. Project Documents updates



6. Develop Schedule	1.Schedule Management Plan 2.Activity List 3.Activity Attributes 4.Project Schedule Network Diagrams 5.Activity Resource Requirements 6.Resource Calendars 7.Activity Duration Estimates 8. Project Scope Statement 9. Risk Register 10.Project Staff Assignments 11.Resource Breakdown Structure 12.Enterprise Environmental Factors 13.Organizational Process Assets	1.Schedule Network Analysis 2.Critical path method 3. Critical chain method 4. Resource Optimization Techniques 5. Modeling Techniques 6. Leads and Lags 7. Schedule Compression 8. Scheduling Tool	1.Project Schedule 2. Schedule baseline 3.Schedule Data 4. Project Calendars 5.Project Management Plan updates 6. Project Documents update
7. Control Schedule	1.Project Management Plan 2.Project Schedule 3.Work performance Data 4.Project Calendars 5.Schedule Data 6. Organizational Process Assets	1.Performance Reviews 2. Project Management Software 3. Resource Optimization Techniques 4.Modeling Techniques 5. Leads and Lags 6.Schedule Comparison 7.Scheduling Tool	1.Work Performance Information 2.Schedule Forecasts 3.Change Requests 4. Project Management Plan updates 5.Project Document updates 6.Organizational Process Asset updates

07. Project Cost Management

Processes	Inputs	Tools & Techniques	Outputs
1.Plan Cost Management	1.Project Management Plan 2.Project Charter 3. Enterprise Environmental Factors 4.Organizational Process Asset	1.Expert Judgment 2.Analytical Techniques 3.Meetings	1.Cost Management Plan
2. Estimate Costs	1.Cost Management Plan 2. Human Resource Plan 3.Scope Baseline 4.Project Schedule 5.Risk Register 6.Enterprise Environmental Factors 7.Organizational Process Assets	1.Expert Judgment 2.Analogous Estimating 3. Parametric Estimating 4. Bottom-up Estimating 5.Three-point Estimates 6.Reserve analysis 7.Cost of Quality 8.Project Management Software 9.Vendor bid Analysis 10.Group decision-making Techniques	1.Activity Cost Estimates 2. Basis of estimate 3. Project Documents updates



3. Determine Budget	1. Cost Management Plan 2. Scope Baseline 3. Activity Cost Estimates 4. Basis of estimate 5. Project Schedule 6. Resource Calendars 7. Risk Register 8. Agreements 9. Organizational Process Assets	1. Cost aggregation 2. Reserve analysis 3. Expert Judgment 4. Historical relationships 5. Funding Limit reconciliation	1. Cost Baseline 2. Project Funding requirements 3. Project Documents updates
4. Control Costs	1. Project Management Plan 2. Project Funding requirements 3. Work Performance Data 4. Organizational Process Assets	1. Earned Value Management 2. Forecasting 3. To-Complete Performance Index (TCPI) 4. Performance reviews 5. Project Management software 6. Reserve Analysis	1. Work Performance Information 2. Cost Forecasts 3. Change Requests 4. Project Management Plan updates 5. Project Document updates 6. Organizational Process Asset updates

08. Project Quality Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Quality Management	1. Project Management Plan 2. Stakeholder Register 3. Risk register 4. Requirements Documentation 5. Enterprise Environmental Factors 6. Organizational Process Assets	1. Cost Benefit Analysis 2. Cost of Quality (COQ) 3. Seven Basic Quality Tools 4. Benchmarking 5. Design of Experiments 6. Statistical Sampling 7. Flow charting 8. Additional Quality Planning Tools 9. Meetings	1. Quality Management Plan 2. Process improvement Plan 3. Quality Metrics 4. Quality Checklists 5. Project Document updates
2. Perform Quality Assurance	1. Quality Management Plan 2. Process Improvement Plan 3. Quality Metrics 4. Quality Control Measurements 5. Project Documents	1. Quality Management and Control Tools 2. Quality audits 3. Process Analysis	1. Change Requests 2. Project Management Plan updates 3. Project Document updates 4. Organizational Process Asset updates
3. Control Quality	1. Project management Plan 2. Quality Metrics 3. Quality Checklists 4. Work Performance Data 5. Approved Change requests 6. Deliverables 7. Project Documents 8. Organizational Process Assets	1. Seven Basic Quality Tools 2. Statistical Sampling 3. Inspection 4. Approved Change Requests Review	1. Quality Control Measurements 2. Validated Changes 3. Validated Deliverables 4. Work Performance Information 5. Change Requests 6. Project Management Plan updates 7. Project Documents updates 8. Organizational Process Asset updates



09. Project HR Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Human Resource Management	1. Project Management Plan 2. Activity Resource Requirements 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Organizational Charts and Position Descriptions 2. Networking 3. Organizational Theory 4. Expert Judgment 5. Meetings	1. Human Resource Management Plan
2. Acquire Project Team	1. Human Resource Management Plan 2. Enterprise Environmental Factors 3. Organizational Process Assets	1. Pre-assignment 2. Negotiation 3. Acquisition 4. Virtual teams 5. Multi-criteria decision Analysis	1. Project Staff Assignments 2. Resource Calendars 3. Project Management Plan updates
3. Develop Project team	1. Human Resource Management Plan 2. Project Staff Assignments 3. Resource Calendars	1. Interpersonal skills 2. Training 3. Team Building Activities 4. Ground Rules 5. Co-location 6. Recognition and rewards 7. Personnel Assessment Tools	1. Team Performance Assessment 2. Enterprise Environmental Factor updates
4. Manage Project Team	1. Human Resource Management Plan 2. Project Staff Assignments 3. Team Performance Assessment 4. Issue Log 5. Performance Performance Reports 6. Organizational Process Assets	1. Observation and Conversation 2. Project Performance Appraisals 3. Conflict management 4. Interpersonal skills	1. Change Requests 2. Project Management Plan updates 3. Project Documents Updates 4. Enterprise Environmental Factor updates 2. Organizational Process Asset updates

10. Project Communication Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Communications Management	1. Project Management Plan 2. Stakeholder Register 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Communications Requirements analysis 2. Communications technology 3. Communication Models 4. Communication methods 5. Meetings	1. Communications Management Plan 2. Project Documents updates
2. Manage Communications	1. Communications Management Plan 2. Work Performance Reports 3. Enterprise Environmental Factors 4. Organizational Process Assets	1. Communication Technology 2. Communication Model 3. Communications methods 4. Information Management Systems 5. Performance Reporting	1. Project Communications 2. Project Management Plan updates 3. Project Documents updates 4. Organizational Process Asset updates



3. Control Communications	1. Project management Plan 2. Project Communications 3. Issue Log 4. Work performance Data 5. Organizational Process Assets	1. Information Management Systems 2. Expert Judgment 3. Meetings	1. Work Performance Information 2. Change Requests 3. Project Management Plan updates 4. Project Documents updates 5. Organizational Process Asset updates
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11. Project Risk Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Risk Management	1. Project Management Plan 2. Project Charter 3. Stakeholder Register 4. Enterprise Environmental Factors 5. Organizational Process Assets	1. Analytical Techniques 2. Expert Judgment 3. Meetings	1. Risk Management Plan
2. Identify Risks	1. Risk Management Plan 2. Cost management plan 3. Schedule management plan 4. Quality management plan 5. Human Resource Management Plan 6. Scope baseline 7. Activity cost estimates 8. Activity Duration estimates 9. Stakeholder register 10. Project Documents 11. Procurement Documents 12. Enterprise Environmental Factors 13. Organizational Process Assets	1. Documentation reviews 2. Information Gathering Techniques 3. Checklist Analysis 4. Assumptions Analysis 5. Diagramming Techniques 6. SWOT Analysis 7. Expert Judgment	1. Risk Register
3. Perform Qualitative Risk Analysis	1. Risk Management Plan 2. Scope Baseline 3. Risk Register 4. Enterprise Environmental Factors 5. Organizational Process Assets	1. Risk Probability and Impact Assessment 2. Probability and Impact Matrix 3. Risk data Quality Assessment 4. Risk Categorization 5. Risk Urgency Assessment 6. Expert Judgment	1. Project Document updates
4. Perform Quantitative Risk Analysis	1. Risk Management Plan 2. Cost management plan 3. Schedule management plan 4. Risk Register 5. Enterprise Environmental Factors 6. Organizational Process Assets	1. Data Gathering and representation Techniques 2. Quantitative Risk Analysis and Modeling Techniques 3. Expert Judgment	1. Project Document updates



5. Plan Risk Responses	1. Risk management Plan 2. Risk Register	1. Strategies for negative risk or threats 2. Strategies for positive risks or opportunities 3. Contingent response strategies 4. Expert Judgment	1. Project Management plan updates 2. Project Document updates
6. Monitor and Control Risks	1. Project Management Plan 2. Risk Register 3. Work Performance Data 4. Work Performance reports	1. Risk Assessment 2. Risk Audits 3. Variance and trend Analysis 4. Technical Performance Measurement 5. Reserve Analysis 6. Meetings	1. Work Performance Information 2. Change Requests 3. Project Management plan updates 4. Project Document updates 5. Organizational Process updates

12. Project Procurement Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Procurement Management	1. Project Management Plan 2. Requirements Documentation 3. Risk Register 4. Activity Resource requirements 5. Project schedule 6. Activity cost estimates 7. Stakeholder Register 8. Enterprise Environmental Factors 9. Organizational Process Assets	1. Make or buy Analysis 2. Expert judgment 3. Market Research 4. Meetings	1. Procurement management Plan 2. Procurement statement of work 3. Procurement Documents 4. Source selection criteria 5. Make or-buy Decisions 6. Change Requests 7. Project Documents updates
2. Conduct Procurements	1. Procurement management Plan 2. Procurement Documents 3. Source selection criteria 4. Seller Proposals 5. Project Documents 6. Make or buy decisions 7. Procurement Statement of Work 8. Organizational Process Assets	1. Bidder Conferences 2. Proposal Evaluation Techniques 3. Independent Estimates 4. Expert Judgment 5. Advertising 6. Analytical Techniques 7. Procurement negotiations	1. Selected Sellers 2. Agreements 3. Resource calendars 4. Change Requests 5. Project Management plan updates 6. Project Document updates
3. Control Procurements	1. Project Management Plan 2. Procurement Documents 3. Agreements 4. Approved Change Requests 5. Work Performance reports 6. Work Performance Data	1. Contract change control system 2. Procurement Performance reviews 3. Inspections and Audits 4. Performance Reporting 5. Payment system 6. Claims administration 7. Records management system	1. Work Performance Information 2. Change Requests 3. Project management plan updates 4. Project Documents updates 5. Organizational process assets updates



4. Close Procurements	1.Project Management Plan 2.Procurement Documents	1.Procurement Audits 2.Procurement Negotiations 3.Records Management system	1.Closed Procurements 2.organizational Process assets updates
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13. Project Stakeholder Management

Processes	Inputs	Tools & Techniques	Outputs
1. Identify Stakeholders	1. Project Charter 2.Procurement Documents 3.Enterprise Environmental Factors 4.Organizational Process Assets	1.Stakeholder Analysis 2.Expert Judgment 3.Meetings	1.Stakeholder Register
2.Plan Stakeholder Management	1.Project Management Plan 2. Stakeholder register 3.Enterprise Environmental Factors 4.Organizational Process Assets	1.Expert Judgment 2.Meetings 3.Analytical Techniques	1.Stakeholder Management Plan 2.Project Documents updates
3. Manage Stakeholder Engagement	1. Stakeholder Management Plan 2. Communications Management Plan 3.Change Log 4.Organizational Process Assets	1.Communication Methods 2.Interpersonal skills 3.Management skills	1.Issue Log 2.Change Requests 3.Project Management Plan updates 4.Project Document updates 5.Organizational Process Assets updates
4. Control Stakeholder Engagement	1. Project Management Plan 2. Issue Log 3.Work Performance Data 4.Project Documents	1.Information Management Systems 2.Expert Judgment 3.Meetings	1.Work performance Information 2.Change Requests 3.Project Management Plan updates 4.Project Document updates 5.Organizational Process Assets updates