Processes Inputs, Tools & Techniques and Outputs

04. Project Integration Management

Processes	Inputs	Tools & Techniques	Outputs
1. Develop Project Charter	04.1.1 Business documents 04.1.2 Agreements 04.1.3 Enterprise environmental factors 04.1.4 Organizational process assets	04.1.1 Expert judgment 04.1.2 Data gathering 04.1.3 Interpersonal and team skills 04.1.4 Meetings	04.1.1 Project charter 04.1.2 Assumption log
2. Develop Project Management Plan	04.2.1 Project charter 04.2.2 Outputs from other processes 04.2.3 Enterprise environmental factors 04.2.4 Organizational process assets	04.2.1 Expert judgment 04.2.2 Data gathering 04.2.3 Interpersonal and team skills 04.2.4 Meetings	04.2.1 Project management plan
3. Direct and Manage Project Work	04.3.1 Project management plan 04.3.2 Project documents 04.3.3 Approved change requests 04.3.4 Enterprise environmental factors 04.3.5 Organizational process assets	04.3.1 Expert judgment 04.3.2 Project management information system 04.3.3 Meetings	04.3.1 Deliverables 04.3.2 Work performance data 04.3.3 Issue log 04.3.4 Change requests 04.3.5 Project management plan updates 04.3.6 Project documents updates 04.3.7 Organizational process assets updates
4. Manage Project Knowledge	04.4.1 Project management plan 04.4.2 Project documents 04.4.3 Deliverables 04.4.4 Enterprise environmental factors 04.4.5 Organizational process assets	04.4.1 Expert judgment 04.4.2 Knowledge management 04.4.3 Information management 04.4.4 Interpersonal and team skills	04.4.1 Lessons learned register 04.4.2 Project management plan updates 04.4.3 Organizational process assets updates
5. Monitor and Control Project Work	04.5.1 Project management plan 04.5.2 Project documents 04.5.3 Work performance information 04.5.4 Agreements 04.5.5 Enterprise environmental factors 04.5.6 Organizational process assets	04.5.1 Expert judgment 04.5.2 Data analysis 04.5.3 Decision making 04.5.4 Meetings	04.5.1 Work performance reports 04.5.2 Change requests 04.5.3 Project management plan updates 04.5.4 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

6. Perform Integrated Change Control	04.6.1 Project management plan 04.6.2 Project documents 04.6.3 Work performance reports 04.6.4 Change requests 04.6.5 Enterprise environmental factors 04.6.6 Organizational process assets	04.6.1 Expert judgment 04.6.2 Change control tools 04.6.3 Data analysis 04.6.4 Decision making 04.6.5 Meetings	04.6.1 Approved change requests 04.6.2 Project management plan updates 04.6.3 Project documents updates
7. Close Project or Phase	04.7.1 Project charter 04.7.2 Project management plan 04.7.3 Project documents 04.7.4 Accepted deliverables 04.7.5 Business documents 04.7.6 Agreements 04.7.7 Procurement documentation 04.7.8 Organizational process assets	04.7.1 Expert judgment 04.7.2 Data analysis 04.7.3 Meetings	04.7.1 Project documents updates 04.7.2 Final product, service, or result transition 04.7.3 Final report 04.7.4 Organizational process assets updates

05. Project Scope Management

Processes	Inputs	Tools & Techniques	Outputs
1.Plan Scope Management	05.1.1 Project charter 05.1.2 Project management plan 05.1.3 Enterprise environmental factors 05.1.4 Organizational process assets	05.1.1 Expert judgment 05.1.2 Data analysis 05.1.3 Meetings	05.1.1 Scope management plan 05.1.2 Requirements management plan
2. Collect Requirements	05.2.1 Project charter 05.2.2 Project management plan 05.2.3 Project documents 05.2.4 Business documents 05.2.5 Agreements 05.2.6 Enterprise environmental factors 05.2.7 Organizational process assets	05.2.1 Expert judgment 05.2.2 Data gathering 05.2.3 Data analysis 05.2.4 Decision making 05.2.5 Data representation 05.2.6 Interpersonal and team skills 05.2.7 Context diagram 05.2.8 Prototypes	05.2.1 Requirements documentation 05.2.2 Requirements traceability matrix
3. Define Scope	05.3.1 Project charter 05.3.2 Project management plan 05.3.3 Project documents 05.3.4 Enterprise environmental factors 05.3.5 Organizational process assets	05.3.1 Expert judgment 05.3.2 Data analysis 05.3.3 Decision making 05.3.4 Interpersonal and team skills 05.3.5 Product analysis	05.3.1 Project scope statement 05.3.2 Project documents updates
4. Create WBS	05.4.1 Project management plan 05.4.2 Project documents 05.4.3 Enterprise environmental factors 05.4.4 Organizational process assets	05.4.1 Expert judgment 05.4.2 Decomposition	05.4.1 Scope baseline 05.4.2 Project documents updates
5. Validate Scope	05.5.1 Project management plan 05.5.2 Project documents 05.5.3 Verified deliverables 05.5.4 Work performance data	05.5.1 Inspection 05.5.2 Decision making	05.5.1 Accepted deliverables 05.5.2 Work performance information 05.5.3 Change requests 05.5.4 Project documents updates
6. Control Scope	05.6.1 Project management plan 05.6.2 Project documents	05.6.1 Data analysis	05.6.1 Work performance information 05.6.2 Change requests

Processes Inputs, Tools & Techniques and Outputs

	05.6.3 Work performance data		05.6.3 Project management plan updates
	05.6.4 Organizational process assets		05.6.4 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

06. Project Schedule Management

Processes	Inputs	Tools & Techniques	Outputs
1.Plan Schedule Management	06.1.1 Project charter 06.1.2 Project management plan 06.1.3 Enterprise environmental factors 06.1.4 Organizational process assets	06.1.1 Expert judgment 06.1.2 Data analysis 06.1.3 Meetings	06.1.1 Schedule management plan
2. Define Activities	06.2.1 Project management plan 06.2.2 Enterprise environmental factors 06.2.3 Organizational process assets	06.2.1 Expert judgment 06.2.2 Decomposition 06.2.3 Rolling wave planning 06.2.4 Meetings	06.2.1 Activity list 06.2.2 Activity attributes 06.2.3 Milestone list 06.2.4 Change requests 06.2.5 Project management plan updates
3. Sequence Activities	06.3.1 Project management plan 06.3.2 Project documents 06.3.3 Enterprise environmental factors 06.3.4 Organizational process assets	06.3.1 Precedence diagramming method 06.3.2 Dependency determination and integration 06.3.3 Leads and lags 06.3.4 Project management information system	06.3.1 Project schedule network diagrams 06.3.2 Project documents updates
4. Estimate Activity Durations	06.4.1 Project management plan 06.4.2 Project documents 06.4.3 Enterprise environmental factors 06.4.4 Organizational process assets	06.4.1 Expert judgment 06.4.2 Analogous estimating 06.4.3 Parametric estimating 06.4.4 Three-point estimating 06.4.5 Bottom-up estimating 06.4.6 Data analysis 06.4.7 Decision making 06.4.8 Meetings	06.4.1 Duration estimates 06.4.2 Basis of estimates 06.4.3 Project documents updates
5. Develop Schedule	06.5.1 Project management plan 06.5.2 Project documents 06.5.3 Agreements 06.5.4 Enterprise environmental factors 06.5.5 Organizational process assets	06.5.1 Schedule network analysis 06.5.2 Critical path method 06.5.3 Resource optimization 06.5.4 Data analysis 06.5.5 Leads and lags 06.5.6 Schedule compression	06.5.1 Schedule baseline 06.5.2 Project schedule 06.5.3 Schedule data 06.5.4 Project calendars 06.5.5 Change requests 06.5.6 Project management plan updates

		06.5.7 Project management information system 06.5.8 Agile release planning	06.5.7 Project documents updates
6. Control Schedule	06.6.1 Project management plan 06.6.2 Project documents 06.6.3 Work performance data 06.6.4 Organizational process assets	06.6.1 Data analysis 06.6.2 Critical path method 06.6.3 Project management information system 06.6.4 Resource optimization 06.6.5 Leads and lags 06.6.6 Schedule compression	06.6.1 Work performance information 06.6.2 Schedule forecasts 06.6.3 Change requests 06.6.4 Project management plan updates 06.6.5 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

07. Project Cost Management

Processes	Inputs	Tools & Techniques	Outputs
1.Plan Cost Management	07.1.1 Project charter 07.1.2 Project management plan 07.1.3 Enterprise environmental factors 07.1.4 Organizational process assets	07.1.1 Expert judgment 07.1.2 Data analysis 07.1.3 Meetings	07.1.1 Cost management plan
2. Estimate Costs	07.2.1 Project management plan 07.2.2 Project documents 07.2.3 Enterprise environmental factors 07.2.4 Organizational process assets	07.2.1 Expert judgment 07.2.2 Analogous estimating 07.2.3 Parametric estimating 07.2.4 Bottom-up estimating 07.2.5 Three-point estimating 07.2.6 Data analysis 07.2.7 Project management information system 07.2.8 Decision making	07.2.1 Cost estimates 07.2.2 Basis of estimates 07.2.3 Project documents updates
3. Determine Budget	07.3.1 Project management plan 07.3.2 Project documents 07.3.3 Business documents 07.3.4 Agreements 07.3.5 Enterprise environmental factors 07.3.6 Organizational process assets	07.3.1 Expert judgment 07.3.2 Cost aggregation 07.3.3 Data analysis 07.3.4 Historical information review 07.3.5 Funding limit reconciliation 07.3.6 Financing	07.3.1 Cost baseline 07.3.2 Project funding requirements 07.3.3 Project documents updates
4. Control Costs	07.4.1 Project management plan 07.4.2 Project documents 07.4.3 Project funding requirements 07.4.4 Work performance data 07.4.5 Organizational process assets	07.4.1 Expert judgment 07.4.2 Data analysis 07.4.3 To-complete performance index 07.4.4 Project management information system	07.4.1 Work performance information 07.4.2 Cost forecasts 07.4.3 Change requests 07.4.4 Project management plan updates 07.4.5 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

08. Project Quality Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Quality Management	08.1.1 Project charter 08.1.2 Project management plan 08.1.3 Project documents 08.1.4 Enterprise environmental factors 08.1.5 Organizational process assets	08.1.1 Expert judgement 08.1.2 Data gathering 08.1.3 Data analysis 08.1.4 Decision making 08.1.5 Data representation 08.1.6 Test and inspection planning 08.1.7 Meetings	08.1.1 Quality management plan 08.1.2 Quality metrics 08.1.3 Project management plan updates 08.1.4 Project documents updates
2. Manage Quality	08.2.1 Project management plan 08.2.2 Project documents 08.2.3 Organizational process assets	08.2.1 Data gathering 08.2.2 Data analysis 08.2.3 Decision making 08.2.4 Data representation 08.2.5 Audits 08.2.6 Design for X 08.2.7 Problem solving 08.2.8 Quality improvement methods	08.2.1 Quality reports 08.2.2 Test and evaluation documents 08.2.3 Change requests 08.2.4 Project management plan updates 08.2.5 Project documents updates
3.Control Quality	08.3.1 Project management plan 08.3.2 Project documents 08.3.3 Approved change requests 08.3.4 Deliverables 08.3.5 Work performance data 08.3.6 Enterprise environmental factors 08.3.7 Organizational process assets	08.3.1 Data gathering 08.3.2 Data analysis 08.3.3 Inspection 08.3.4 Testing/product evaluations 08.3.5 Data representation 08.3.6 Meetings	08.3.1 Quality control measurements 08.3.2 Verified deliverables 08.3.3 Work performance information 08.3.4 Change requests 08.3.5 Project management plan updates 08.3.6 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

09. Project Resource Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Resource Management	09.1.1 Project charter 09.1.2 Project management plan 09.1.3 Project documents 09.1.4 Enterprise environmental factors 09.1.5 Organizational process assets	09.1.1 Expert judgment 09.1.2 Data representation 09.1.3 Organizational theory 09.1.4 Meetings	09.1.1 Resource management plan 09.1.2 Team charter 09.1.3 Project documents updates
2. Estimate Activity Resources	09.2.1 Project management plan 09.2.2 Project documents 09.2.3 Enterprise environmental factors 09.2.4 Organizational process assets	09.2.1 Expert judgment 09.2.2 Bottom-up estimating 09.2.3 Analogous estimating 09.2.4 Parametric estimating 09.2.5 Data analysis 09.2.6 Project management information system 09.2.7 Meetings	09.2.1 Resource requirements 09.2.2 Basis of estimates 09.2.3 Resource breakdown structure 09.2.4 Project documents updates
3. Aquire Resources	09.3.1 Project management plan 09.3.2 Project documents 09.3.3 Enterprise environmental factors 09.3.4 Organizational process assets	09.3.1 Decision making 09.3.2 Interpersonal and team skills 09.3.3 Pre-assignment 09.3.4 Virtual teams	09.3.1 Physical resource assignments 09.3.2 Project team assignments 09.3.3 Resource calendars 09.3.4 Change requests 09.3.5 Project management plan updates 09.3.6 Project documents updates 09.3.7 Enterprise environmental factors updates 09.3.8 Organizational process assets updates
4. Develop team	09.4.1 Project management plan 09.4.2 Project documents 09.4.3 Enterprise environmental factors 09.4.4 Organizational process assets	09.4.1 Colocation 09.4.2 Virtual teams 09.4.3 Communication technology 09.4.4 Interpersonal and team skills 09.4.5 Recognition and rewards 09.4.6 Training 09.4.7 Individual and team assessments	09.4.1 Team performance assessments 09.4.2 Change requests 09.4.3 Project management plan updates 09.4.4 Project documents updates 09.4.5 Enterprise environmental factors updates 09.4.6 Organizational process assets updates

		09.4.8 Meetings	
5. Manage Team	09.5.1 Project management plan 09.5.2 Project documents 09.5.3 Work performance reports 09.5.4 Team performance assessments 09.5.5 Enterprise environmental factors 09.5.6 Organizational process assets	09.5.1 Interpersonal and team skills 09.5.2 Project management information system	09.5.1 Change requests 09.5.2 Project management plan updates 09.5.3 Project documents updates 09.5.4 Enterprise environmental factors updates
6. Control Resources	09.6.1 Project management plan 09.6.2 Project documents 09.6.3 Work performance data 09.6.4 Agreements 09.6.5 Organizational process assets	09.6.1 Data analysis 09.6.2 Problem solving 09.6.3 Interpersonal and team skills 09.6.4 Project management information system	09.6.1 Work performance information 09.6.2 Change requests 09.6.3 Project management plan updates 09.6.4 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

10. Project Communication Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Communications Management	10.1.1 Project charter 10.1.2 Project management plan 10.1.3 Project documents 10.1.4 Enterprise environmental factors 10.1.5 Organizational process assets	10.1.1 Expert judgment 10.1.2 Communication requirements analysis 10.1.3 Communication technology 10.1.4 Communication models 10.1.5 Communication methods 10.1.6 Interpersonal and team skills 10.1.7 Data representation 10.1.8 Meetings	10.1.1 Communications management plan 10.1.2 Project management plan updates 10.1.3 Project documents update
2. Manage Communications	10.2.1 Project management plan 10.2.2 Project documents 10.2.3 Work performance reports 10.2.4 Enterprise environmental factors 10.2.5 Organizational process assets	10.2.1 Communication technology 10.2.2 Communication methods 10.2.3 Communication skills 10.2.4 Project management information system 10.2.5 Project reporting 10.2.6 Interpersonal and team skills 10.2.7 Meetings	10.2.1 Project communications 10.2.2 Project management plan updates 10.2.3 Project documents updates 10.2.4 Organizational process assets updates
3. Monitor Communications	10.3.1 Project management plan 10.3.2 Project documents 10.3.3 Work performance data 10.3.4 Enterprise environmental factors 10.3.5 Organizational process assets	10.3.1 Expert judgment 10.3.2 Project management information system 10.3.3 Data representation 10.3.4 Interpersonal and team skills 10.3.5 Meetings	10.3.1 Work performance information 10.3.2 Change requests 10.3.3 Project management plan updates 10.3.4 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

11. Project Risk Management

Processes	Inputs	Tools & Techniques	Outputs
1. Plan Risk Management	11.1.1 Project charter 11.1.2 Project management plan 11.1.3 Project documents 11.1.4 Enterprise environmental factors 11.1.5 Organizational process assets	11.1.1 Expert judgment 11.1.2 Data analysis 11.1.3 Meetings	11.1.1 Risk management plan
2.Identify Risks	11.2.1 Project management plan 11.2.2 Project documents 11.2.3 Agreements 11.2.4 Procurement documentation 11.2.5 Enterprise environmental factors 11.2.6 Organizational process assets	11.2.1 Expert judgment 11.2.2 Data gathering 11.2.3 Data analysis 11.2.4 Interpersonal and team skills 11.2.5 Prompt lists 11.2.6 Meetings	11.2.1 Risk register 11.2.2 Risk report 11.2.3 Project documents updates
3. Perform Qualitative Risk Analysis	11.3.1 Project management plan 11.3.2 Project documents 11.3.3 Enterprise environmental factors 11.3.4 Organizational process assets	11.3.1 Expert judgment 11.3.2 Data gathering 11.3.3 Data analysis 11.3.4 Interpersonal and team skills 11.3.5 Risk categorization 11.3.6 Data representation 11.3.7 Meetings	11.3.1 Project documents updates
4. Perform Quantitative Risk Analysis	11.4.1 Project management plan 11.4.2 Project documents 11.4.3 Enterprise environmental factors 11.4.4 Organizational process assets	11.4.1 Expert judgment 11.4.2 Data gathering 11.4.3 Interpersonal and team skills 11.4.4 Representations of uncertainty 11.4.5 Data analysis	11.4.1 Project documents updates
5.Plan Risk Responses	11.5.1 Project management plan 11.5.2 Project documents 11.5.3 Enterprise environmental factors 11.5.4 Organizational process assets	11.5.1 Expert judgment 11.5.2 Data gathering 11.5.3 Interpersonal and team skills 11.5.4 Strategies for threats 11.5.5 Strategies for opportunities	11.5.1 Change requests 11.5.2 Project management plan updates 11.5.3 Project documents updates

Processes Inputs, Tools & Techniques and Outputs

		11.5.6 Contingent response strategies 11.5.7 Strategies for overall project risk 11.5.8 Data analysis 11.5.9 Decision making	
6. Implement Risk Responses	11.6.1 Project management plan 11.6.2 Project documents 11.6.3 Organizational process assets	11.6.1 Expert judgment 11.6.2 Interpersonal and team skills 11.6.3 Project management information system	11.6.1 Change requests 11.6.2 Project documents updates
7. Monitor Risks	11.7.1 Project management plan 11.7.2 Project documents 11.7.3 Work performance data 11.7.4 Work performance reports	11.7.1 Data analysis 11.7.2 Audits 11.7.3 Meetings	11.7.1 Work performance information 11.7.2 Change requests 11.7.3 Project management plan updates 11.7.4 Project documents updates 11.7.5 Organizational process assets updates

Processes Inputs, Tools & Techniques and Outputs

12. Project Procurement Management

Processes	Inputs	Tools & Techniques	Outputs
1.Plan Procurement Management	12.1.1 Project charter 12.1.2 Business documents 12.1.3 Project management plan 12.1.4 Project documents 12.1.5 Enterprise environmental factors 12.1.6 Organizational process assets	12.1.1 Expert judgment 12.1.2 Data gathering 12.1.3 Data analysis 12.1.4 Source selection analysis 12.1.5 Meetings	12.1.1 Procurement management plan 12.1.2 Procurement strategy 12.1.3 Bid documents 12.1.4 Procurement statement of work 12.1.5 Source selection criteria 12.1.6 Make-or-buy decisions 12.1.7 Independent cost estimates 12.1.8 Change requests 12.1.9 Project documents updates 12.1.10 Organizational process assets updates
2. Conduct Procurements	12.2.1 Project management plan 12.2.2 Project documents 12.2.3 Procurement documentation 12.2.4 Seller proposals 12.2.5 Enterprise environmental factors 12.2.6 Organizational process assets	12.2.1 Expert judgment 12.2.2 Advertising 12.2.3 Bidder conferences 12.2.4 Data analysis 12.2.5 Interpersonal and team skills	12.2.1 Selected sellers 12.2.2 Agreements 12.2.3 Change requests 12.2.4 Project management plan updates 12.2.5 Project documents updates 12.2.6 Organizational process assets updates
3.Control Procurements	12.3.1 Project management plan 12.3.2 Project documents 12.3.3 Agreements 12.3.4 Procurement documentation 12.3.5 Approved change requests 12.3.6 Work performance data 12.3.7 Enterprise environmental factors 12.3.8 Organizational process assets	12.3.1 Expert judgment 12.3.2 Claims administration 12.3.3 Data analysis 12.3.4 Inspection 12.3.5 Audits	12.3.1 Closed procurements 12.3.2 Work performance information 12.3.3 Procurement documentation updates 12.3.4 Change requests 12.3.5 Project management plan updates 12.3.6 Project documents updates 12.3.7 Organizational process assets updates

Processes Inputs, Tools & Techniques and Outputs

13. Project Stakeholder Management

Processes	Inputs	Tools & Techniques	Outputs
1. Identify Stakeholders	13.1.1 Project charter 13.1.2 Business documents 13.1.3 Project management plan 13.1.4 Project documents 13.1.5 Agreements 13.1.6 Enterprise environmental factors 13.1.7 Organizational process assets	13.1.1 Expert judgment 13.1.2 Data gathering 13.1.3 Data analysis 13.1.4 Data representation 13.1.5 Meetings	13.1.1 Stakeholder register 13.1.2 Change requests 13.1.3 Project management plan updates 13.1.4 Project documents updates
2.Plan Stakeholder Management	13.2.1 Project charter 13.2.2 Project management plan 13.2.3 Project documents 13.2.4 Agreements 13.2.5 Enterprise environmental factors 13.2.6 Organizational process assets	13.2.1 Expert judgment 13.2.2 Data gathering 13.2.3 Data analysis 13.2.4 Decision making 13.2.5 Data representation 13.2.6 Meetings	13.2.1 Stakeholder engagement plan
3. Manage Stakeholder Engagement	13.3.1 Project management plan 13.3.2 Project documents 13.3.3 Enterprise environmental factors 13.3.4 Organizational process assets	13.3.1 Expert judgment 13.3.2 Communication skills 13.3.3 Interpersonal and team skills 13.3.4 Ground rules 13.3.5 Meetings	13.3.1 Change requests 13.3.2 Project management plan updates 13.3.3 Project documents updates
4. Monitor Stakeholder Engagement	13.4.1 Project management plan 13.4.2 Project documents 13.4.3 Work performance data 13.4.4 Enterprise environmental factors 13.4.5 Organizational process assets	13.4.1 Data analysis 13.4.2 Decision making 13.4.3 Data representation 13.4.4 Communication skills 13.4.5 Interpersonal and team skills 13.4.6 Meetings	13.4.1 Work performance information 13.4.2 Change requests 13.4.3 Project management plan updates 13.4.4 Project documents updates