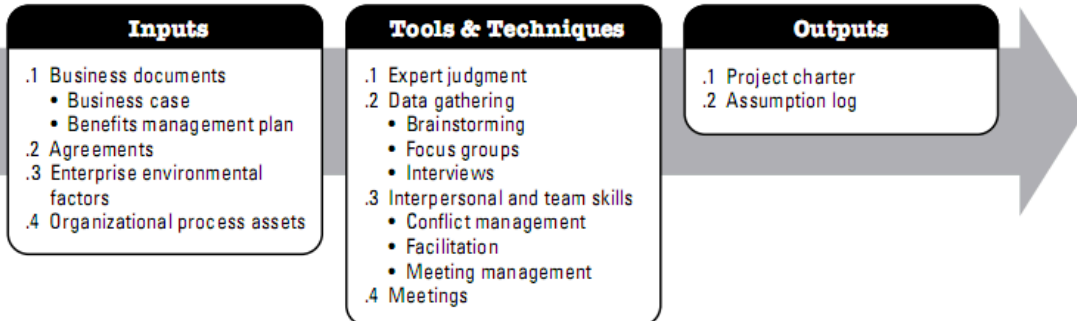
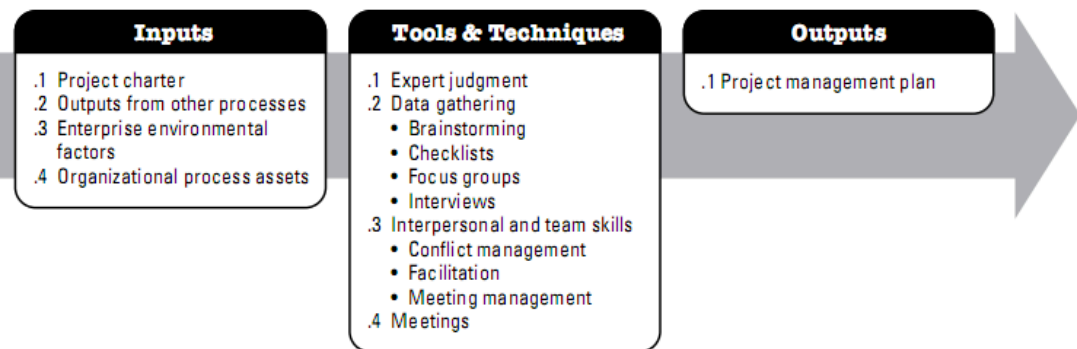


PROJECT INTEGRATION MANAGEMENT

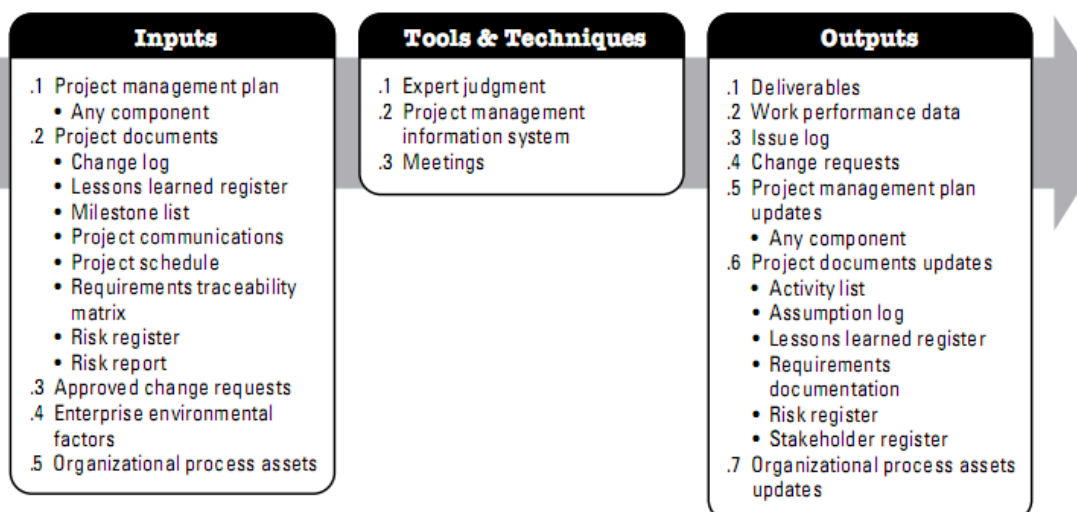
Develop Project Charter



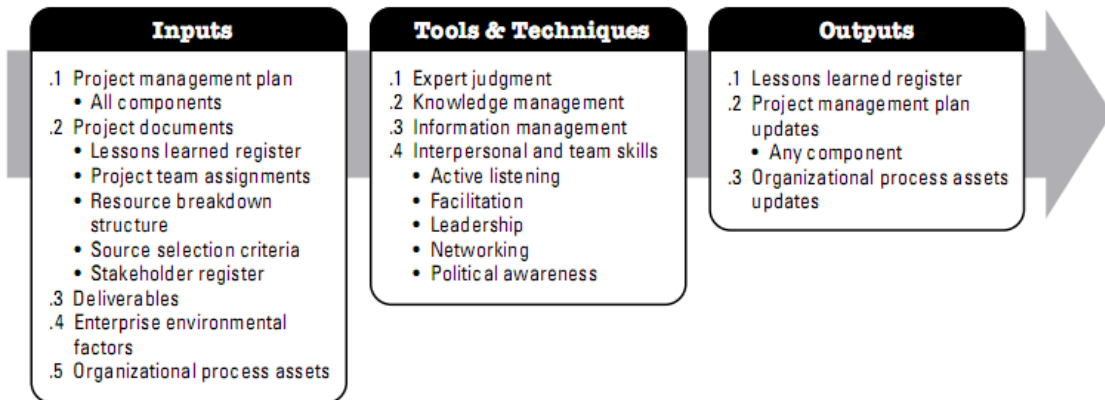
Develop Project Management Plan



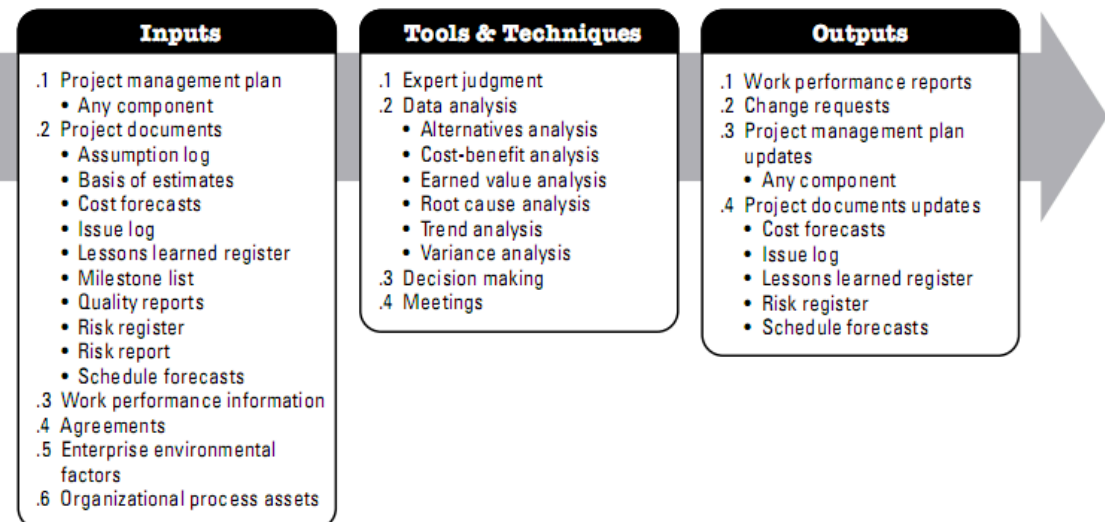
Direct and Manage Project Work



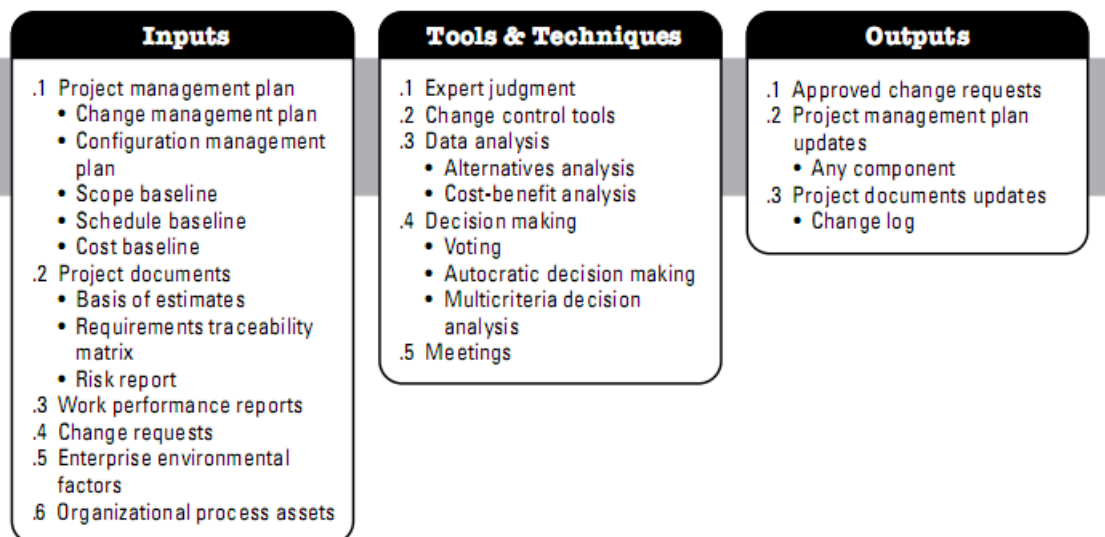
Manage Project Knowledge



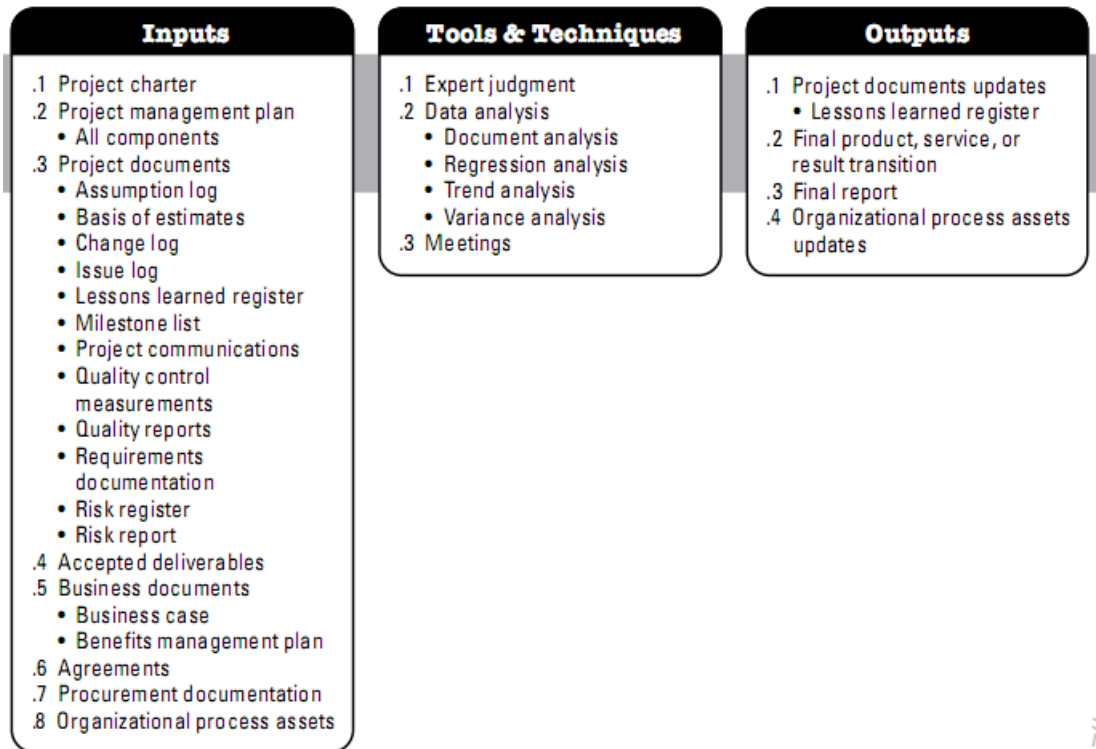
Monitor and Control Project Work



Perform Integrated Change Control



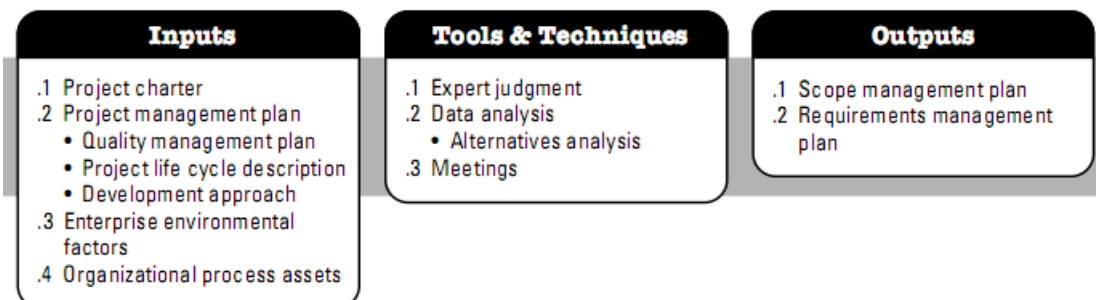
Close Project or Phase



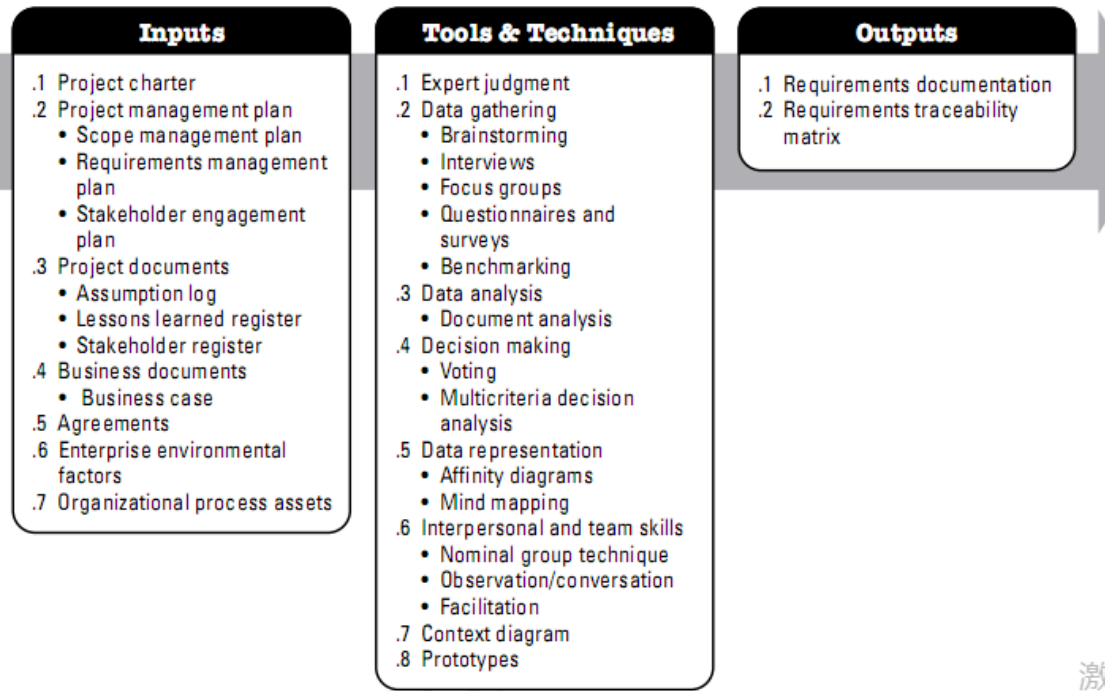
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PROJECT SCOPE MANAGEMENT

Plan Scope Management



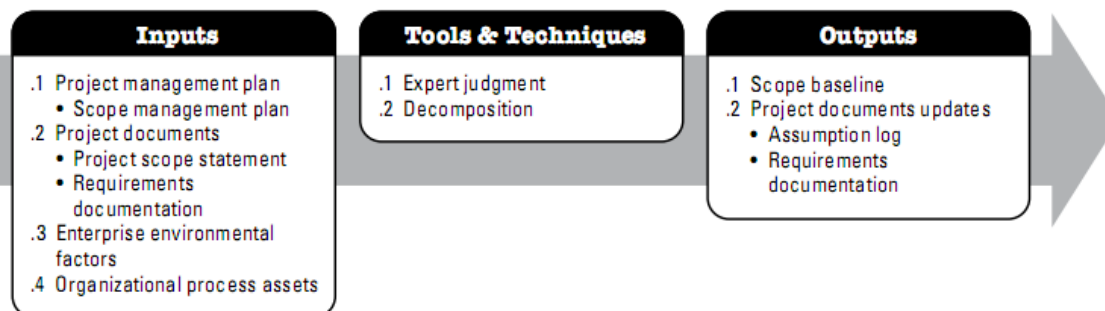
Collect Requirements

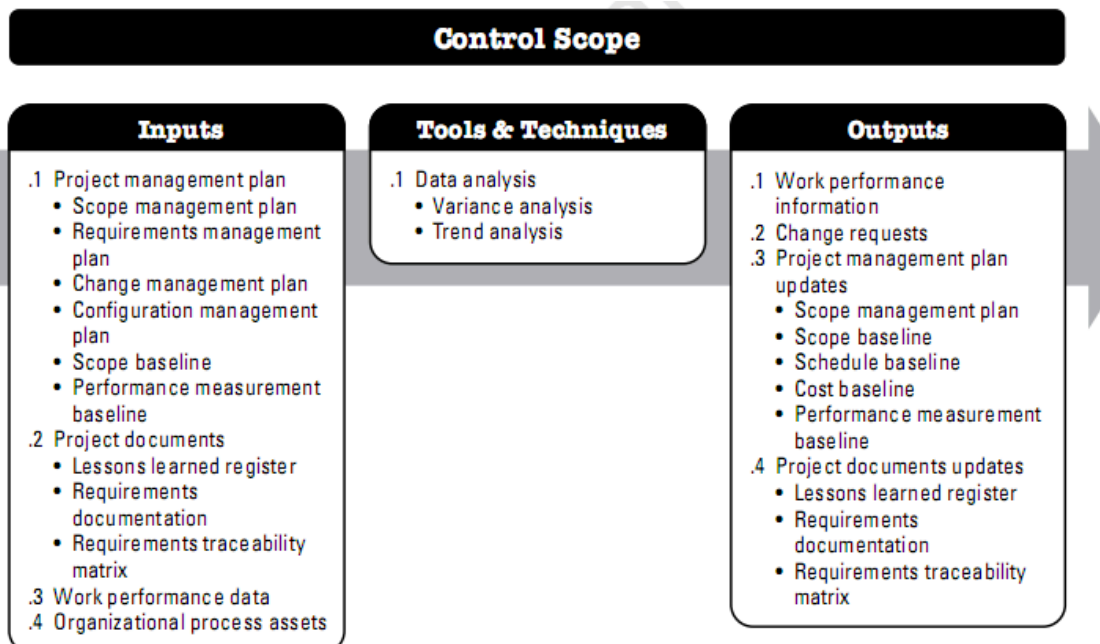
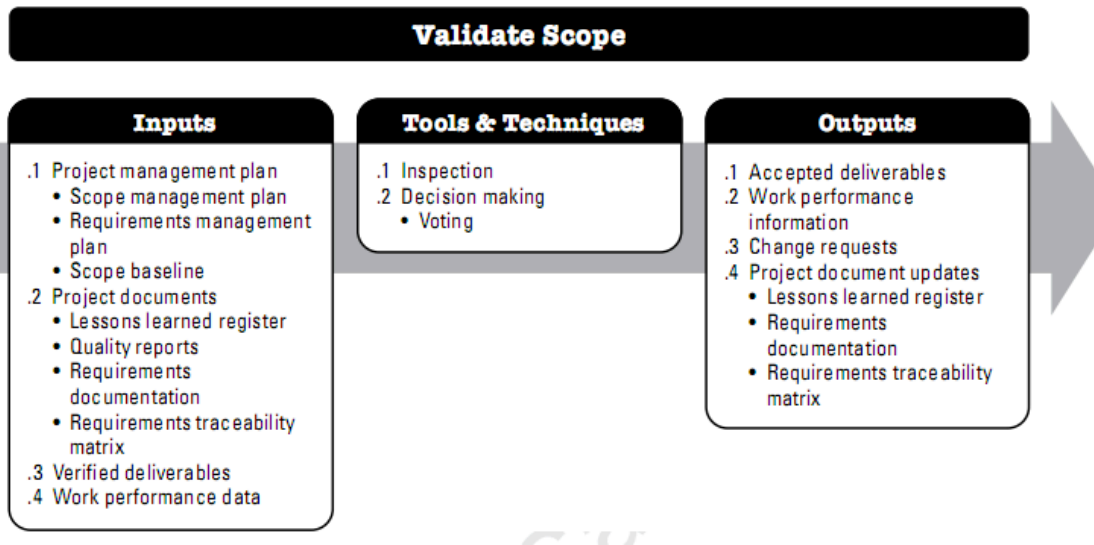


Define Scope



Create WBS





PROJECT SCHEDULE MANAGEMENT



Define Activities

Inputs

- .1 Project management plan
 - Schedule management plan
 - Scope baseline
- .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
 - Schedule baseline
 - Cost baseline

Sequence Activities

Inputs

- .1 Project management plan
 - Schedule management plan
 - Scope baseline
- .2 Project documents
 - Activity attributes
 - Activity list
 - Assumption log
 - Milestone list
- .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
 - Activity attributes
 - Activity list
 - Assumption log
 - Milestone list

Estimate Activity Durations

Inputs

- .1 Project management plan
 - Schedule management plan
 - Scope baseline
- .2 Project documents
 - Activity attributes
 - Activity list
 - Assumption log
 - Lessons learned register
 - Milestone list
 - Project team assignments
 - Resource breakdown structure
 - Resource calendars
 - Resource requirements
 - Risk register
- .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
 - Alternatives analysis
 - Reserve analysis
- .7 Decision making
- .8 Meetings

Outputs

- .1 Duration estimates
- .2 Basis of estimates
- .3 Project documents updates
 - Activity attributes
 - Assumption log
 - Lessons learned register

Develop Schedule

Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project management plan <ul style="list-style-type: none"> • Schedule management plan • Scope baseline .2 Project documents <ul style="list-style-type: none"> • Activity attributes • Activity list • Assumption log • Basis of estimates • Duration estimates • Lessons learned register • Milestone list • Project schedule network diagrams • Project team assignments • Resource calendars • Resource requirements • Risk register .3 Agreements .4 Enterprise environmental factors .5 Organizational process assets 	<ol style="list-style-type: none"> .1 Schedule network analysis .2 Critical path method .3 Resource optimization .4 Data analysis <ul style="list-style-type: none"> • What-if scenario analysis • Simulation .5 Leads and lags .6 Schedule compression .7 Project management information system .8 Agile release planning 	<ol style="list-style-type: none"> .1 Schedule baseline .2 Project schedule .3 Schedule data .4 Project calendars .5 Change requests .6 Project management plan updates <ul style="list-style-type: none"> • Schedule management plan • Cost baseline .7 Project documents updates <ul style="list-style-type: none"> • Activity attributes • Assumption log • Duration estimates • Lessons learned register • Resource requirements • Risk register

Control Schedule

Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project management plan <ul style="list-style-type: none"> • Schedule management plan • Schedule baseline • Scope baseline • Performance measurement baseline .2 Project documents <ul style="list-style-type: none"> • Lessons learned register • Project calendars • Project schedule • Resource calendars • Schedule data .3 Work performance data .4 Organizational process assets 	<ol style="list-style-type: none"> .1 Data analysis <ul style="list-style-type: none"> • Earned value analysis • Iteration burndown chart • Performance reviews • Trend analysis • Variance analysis • What-if scenario analysis .2 Critical path method .3 Project management information system .4 Resource optimization .6 Leads and lags .7 Schedule compression 	<ol style="list-style-type: none"> .1 Work performance information .2 Schedule forecasts .3 Change requests .4 Project management plan updates <ul style="list-style-type: none"> • Schedule management plan • Schedule baseline • Cost baseline • Performance measurement baseline .5 Project documents updates <ul style="list-style-type: none"> • Assumption log • Basis of estimates • Lessons learned register • Project schedule • Resource calendars • Risk register • Schedule data

PROJECT COST MANAGEMENT

Plan Cost Management

Inputs

- .1 Project charter
- .2 Project management plan
 - Schedule management plan
 - Risk 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

Estimate Costs

Inputs

- .1 Project management plan
 - Cost management plan
 - Quality management plan
 - Scope baseline
- .2 Project documents
 - Lessons learned register
 - Project schedule
 - Resources requirements
 - Risk register
- .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
 - Alternatives analysis
 - Reserve analysis
 - Cost of quality
- .7 Project management information system
- .8 Decision making
 - Voting

Outputs

- .1 Cost estimates
- .2 Basis of estimates
- .3 Project documents updates
 - Assumption log
 - Lessons learned register
 - Risk register

Determine Budget

Inputs

- .1 Project management plan
 - Cost management plan
 - Resource management plan
 - Scope baseline
- .2 Project documents
 - Basis of estimates
 - Cost estimates
 - Project schedule
 - Risk register
- .3 Business documents
 - Business case
 - Benefits management plan
- .4 Agreements
- .5 Enterprise environmental factors
- .6 Organizational process assets

Tools & Techniques

- .1 Expert judgment
- .2 Cost aggregation
- .3 Data analysis
 - Reserve analysis
- .4 Historical information review
- .5 Funding limit reconciliation
- .6 Financing

Outputs

- .1 Cost baseline
- .2 Project funding requirements
- .3 Project documents updates
 - Cost estimates
 - Project schedule
 - Risk register

Control Costs

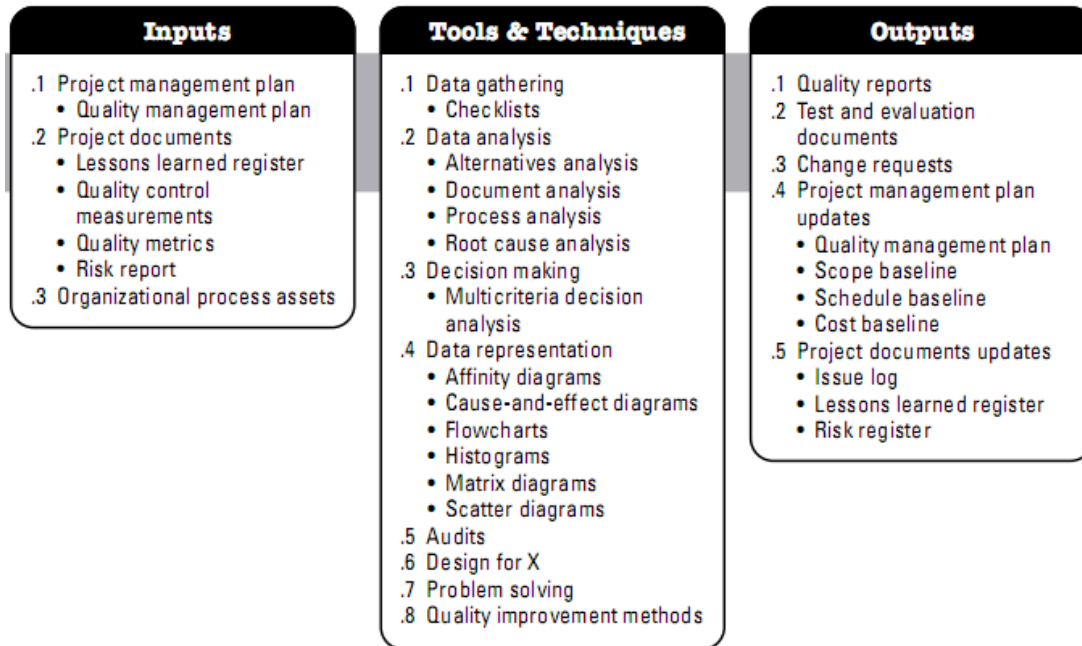
Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project management plan <ul style="list-style-type: none"> • Cost management plan • Cost baseline • Performance measurement baseline .2 Project documents <ul style="list-style-type: none"> • Lessons learned register .3 Project funding requirements .4 Work performance data .5 Organizational process assets 	<ol style="list-style-type: none"> .1 Expert judgment .2 Data analysis <ul style="list-style-type: none"> • Earned value analysis • Variance analysis • Trend analysis • Reserve analysis .3 To-complete performance index .4 Project management information system 	<ol style="list-style-type: none"> .1 Work performance information .2 Cost forecasts .3 Change requests .4 Project management plan updates <ul style="list-style-type: none"> • Cost management plan • Cost baseline • Performance measurement baseline .5 Project documents updates <ul style="list-style-type: none"> • Assumption log • Basis of estimates • Cost estimates • Lessons learned register • Risk register

PROJECT QUALITY MANAGEMENT

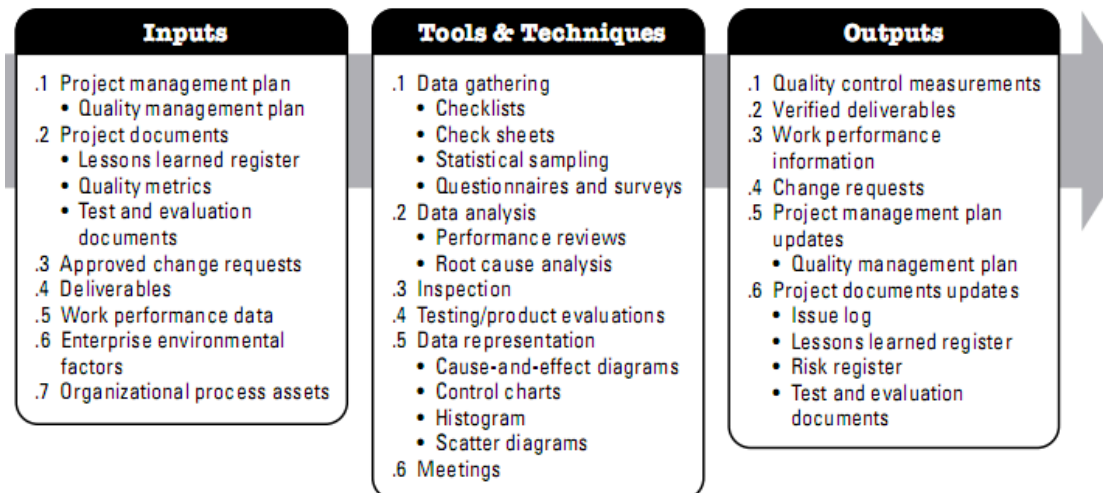
Plan Quality Management

Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project charter .2 Project management plan <ul style="list-style-type: none"> • Requirements management plan • Risk management plan • Stakeholder engagement plan • Scope baseline .3 Project documents <ul style="list-style-type: none"> • Assumption log • Requirements documentation • Requirements traceability matrix • Risk register • Stakeholder register .4 Enterprise environmental factors .5 Organizational process assets 	<ol style="list-style-type: none"> .1 Expert judgment .2 Data gathering <ul style="list-style-type: none"> • Benchmarking • Brainstorming • Interviews .3 Data analysis <ul style="list-style-type: none"> • Cost-benefit analysis • Cost of quality .4 Decision making <ul style="list-style-type: none"> • Multicriteria decision analysis .5 Data representation <ul style="list-style-type: none"> • Flowcharts • Logical data model • Matrix diagrams • Mind mapping .6 Test and inspection planning .7 Meetings 	<ol style="list-style-type: none"> .1 Quality management plan .2 Quality metrics .3 Project management plan updates <ul style="list-style-type: none"> • Risk management plan • Scope baseline .4 Project documents updates <ul style="list-style-type: none"> • Lessons learned register • Requirements traceability matrix • Risk register • Stakeholder register

Manage Quality

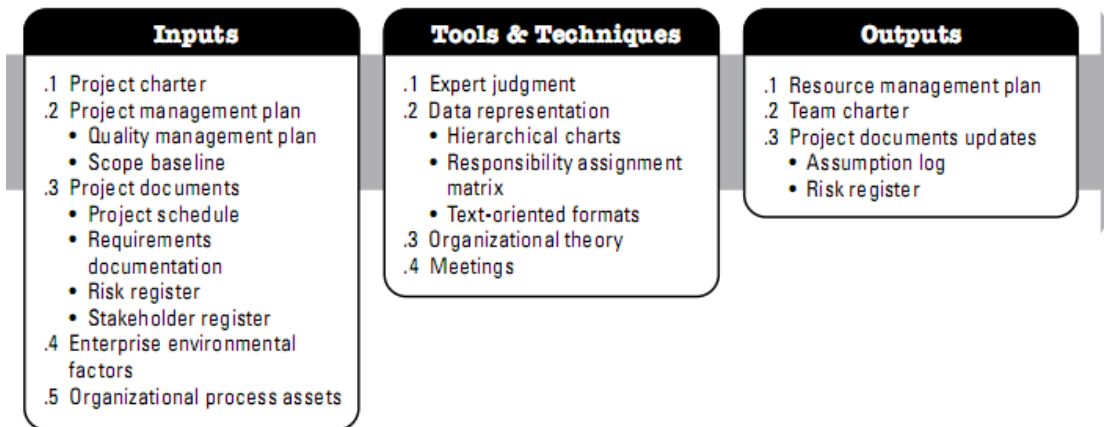


Control Quality

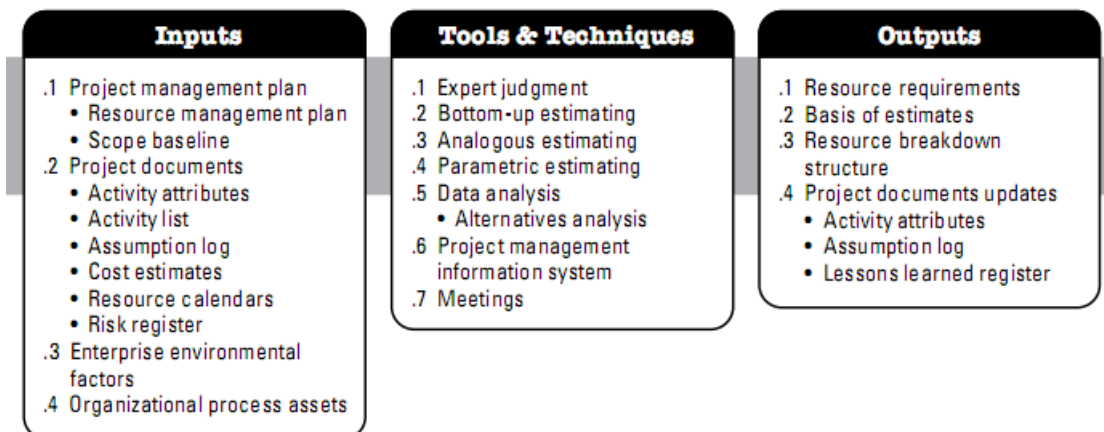


PROJECT RESOURCE MANAGEMENT

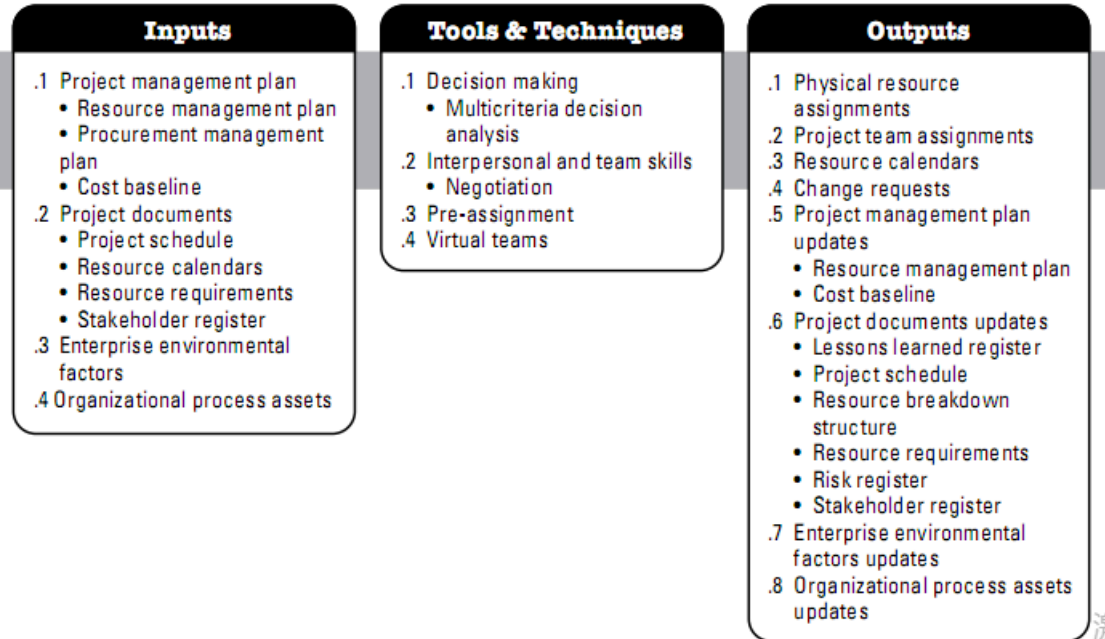
Plan Resource Management



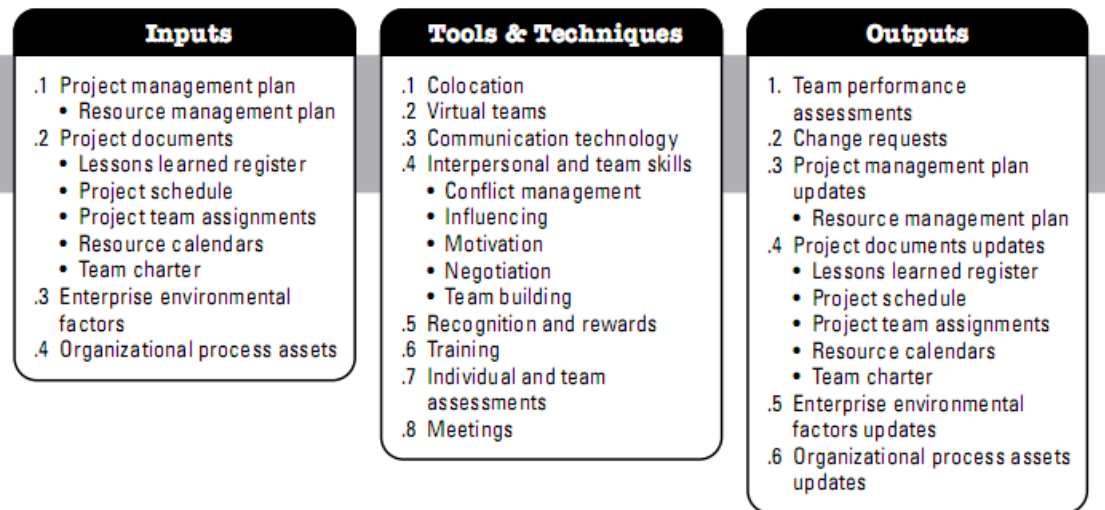
Estimate Activity Resources



Acquire Resources



Develop Team



Manage Team

Inputs

- .1 Project management plan
 - Resource management plan
- .2 Project documents
 - Issue log
 - Lessons learned register
 - Project team assignments
 - Team charter
- .3 Work performance reports
- .4 Team performance assessments
- .5 Enterprise environmental factors
- .6 Organizational process assets

Tools & Techniques

- .1 Interpersonal and team skills
 - Conflict management
 - Decision making
 - Emotional intelligence
 - Influencing
 - Leadership
- .2 Project management information system

Outputs

- .1 Change requests
- .2 Project management plan updates
 - Resource management plan
 - Schedule baseline
 - Cost baseline
- .3 Project documents updates
 - Issue log
 - Lessons learned register
 - Project team assignments
- .4 Enterprise environmental factors updates

Control Resources

Inputs

- .1 Project management plan
 - Resource management plan
- .2 Project documents
 - Issue log
 - Lessons learned register
 - Physical resource assignments
 - Project schedule
 - Resource breakdown structure
 - Resource requirements
 - Risk register
- .3 Work performance data
- .4 Agreements
- .5 Organizational process assets

Tools & Techniques

- .1 Data analysis
 - Alternatives analysis
 - Cost-benefit analysis
 - Performance reviews
 - Trend analysis
- .2 Problem solving
- .3 Interpersonal and team skills
 - Negotiation
 - Influencing
- .4 Project management information system

Outputs

- .1 Work performance information
- .2 Change requests
- .3 Project management plan updates
 - Resource management plan
 - Schedule baseline
 - Cost baseline
- .4 Project documents updates
 - Assumption log
 - Issue log
 - Lessons learned register
 - Physical resource assignments
 - Resource breakdown structure
 - Risk register

PROJECT COMMUNICATIONS MANAGEMENT

Plan Communications Management

Inputs

- .1 Project charter
- .2 Project management plan
 - Resource management plan
 - Stakeholder engagement plan
- .3 Project documents
 - Requirements documentation
 - Stakeholder register
- .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
 - Communication styles assessment
 - Political awareness
 - Cultural awareness
- .7 Data representation
 - Stakeholder engagement assessment matrix
- .8 Meetings

Outputs

- .1 Communications management plan
- .2 Project management plan updates
 - Stakeholder engagement plan
- .3 Project documents updates
 - Project schedule
 - Stakeholder register

Manage Communications

Inputs

- .1 Project management plan
 - Resource management plan
 - Communications management plan
 - Stakeholder engagement plan
- .2 Project documents
 - Change log
 - Issue log
 - Lessons learned register
 - Quality report
 - Risk report
 - Stakeholder register
- .3 Work performance reports
- .4 Enterprise environmental factors
- .5 Organizational process assets

Tools & Techniques

- .1 Communication technology
- .2 Communication methods
- .3 Communication skills
 - Communication competence
 - Feedback
 - Nonverbal
 - Presentations
- .4 Project management information system
- .5 Project reporting
- .6 Interpersonal and team skills
 - Active listening
 - Conflict management
 - Cultural awareness
 - Meeting management
 - Networking
 - Political awareness
- .7 Meetings

Outputs

- .1 Project communications
- .2 Project management plan updates
 - Communications management plan
 - Stakeholder engagement plan
- .3 Project documents updates
 - Issue log
 - Lessons learned register
 - Project schedule
 - Risk register
 - Stakeholder register
- .4 Organizational process assets updates

Monitor Communications

Inputs

- .1 Project management plan
 - Resource management plan
 - Communications management plan
 - Stakeholder engagement plan
- .2 Project documents
 - Issue log
 - Lessons learned register
 - Project communications
- .3 Work performance data
- .4 Enterprise environmental factors
- .5 Organizational process assets

Tools & Techniques

- .1 Expert judgment
- .2 Project management information system
- .3 Data analysis
 - Stakeholder engagement assessment matrix
- .4 Interpersonal and team skills
 - Observation/conversation
- .5 Meetings

Outputs

- .1 Work performance information
- .2 Change requests
- .3 Project management plan updates
 - Communications management plan
 - Stakeholder engagement plan
- .4 Project documents updates
 - Issue log
 - Lessons learned register
 - Stakeholder register

PROJECT RISK MANAGEMENT

Plan Risk Management

Inputs

- .1 Project charter
- .2 Project management plan
 - All components
- .3 Project documents
 - Stakeholder register
- .4 Enterprise environmental factors
- .5 Organizational process assets

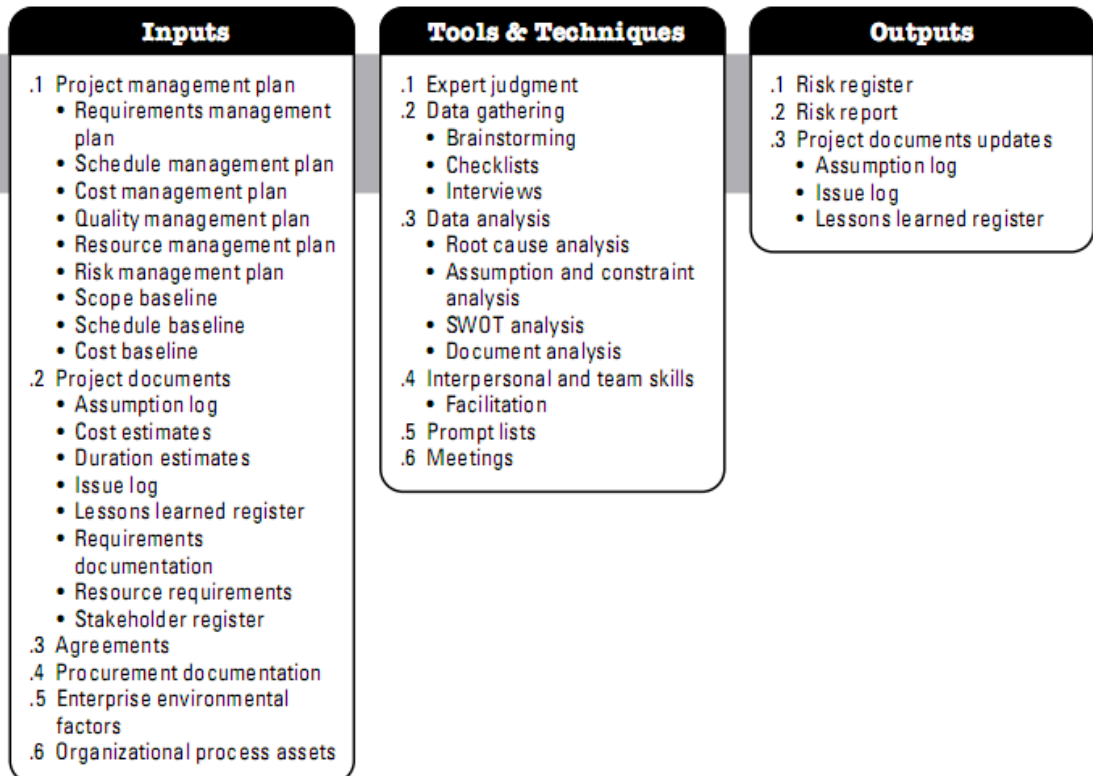
Tools & Techniques

- .1 Expert judgment
- .2 Data analysis
 - Stakeholder analysis
- .3 Meetings

Outputs

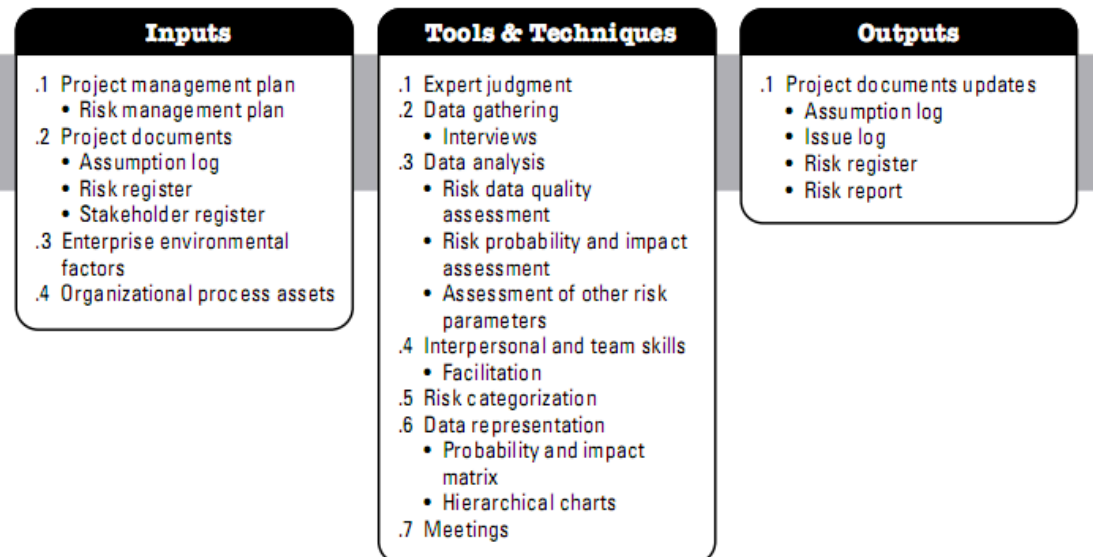
- .1 Risk management plan

Identify Risks

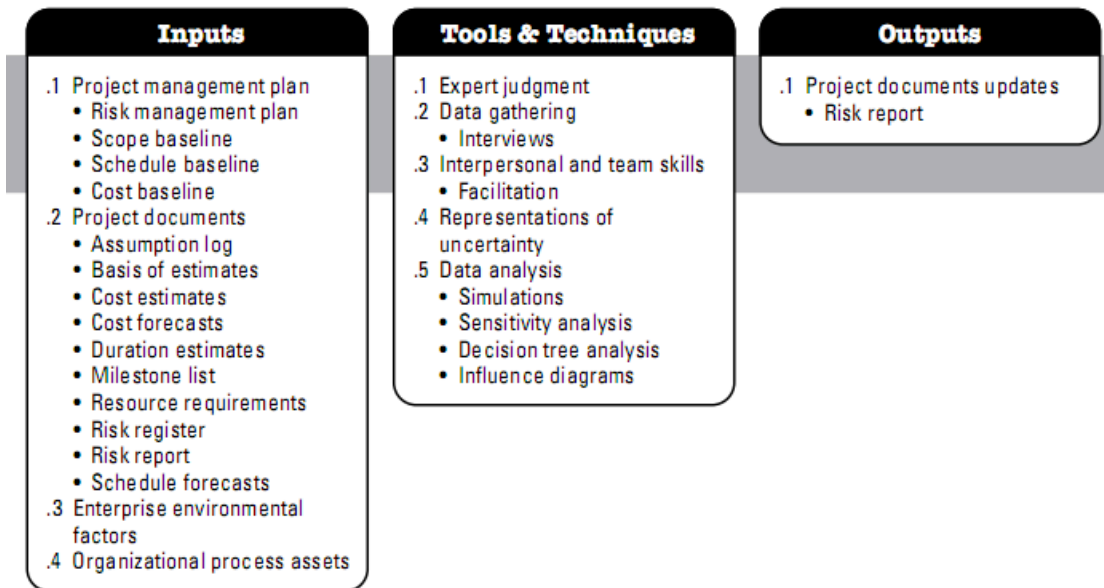


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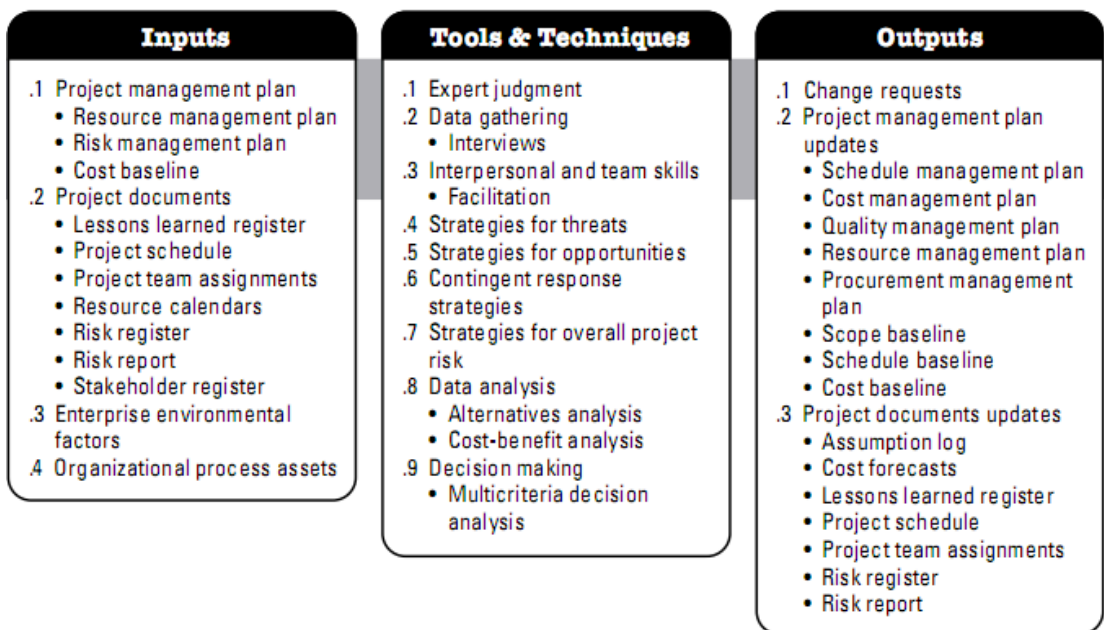
Perform Qualitative Risk Analysis



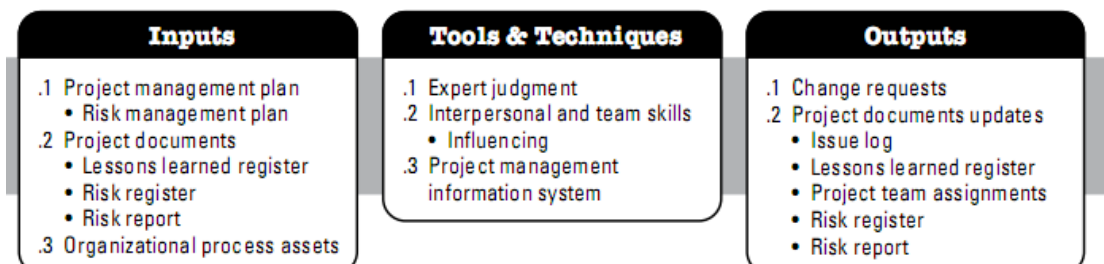
Perform Quantitative Risk Analysis



Plan Risk Responses



Implement Risk Responses



Monitor Risks

Inputs

- .1 Project management plan
 - Risk management plan
- .2 Project documents
 - Issue log
 - Lessons learned register
 - Risk register
 - Risk report
- .3 Work performance data
- .4 Work performance reports

Tools & Techniques

- .1 Data analysis
 - Technical performance analysis
 - Reserve analysis
- .2 Audits
- .3 Meetings

Outputs

- .1 Work performance information
- .2 Change requests
- .3 Project management plan updates
 - Any component
- .4 Project documents updates
 - Assumption log
 - Issue log
 - Lessons learned register
 - Risk register
 - Risk report
- .5 Organizational process assets updates

PROJECT PROCUREMENT MANAGEMENT

Plan Procurement Management

Inputs

- .1 Project charter
- .2 Business documents
 - Business case
 - Benefits management plan
- .3 Project management plan
 - Scope management plan
 - Quality management plan
 - Resource management plan
 - Scope baseline
- .4 Project documents
 - Milestone list
 - Project team assignments
 - Requirements documentation
 - Requirements traceability matrix
 - Resource requirements
 - Risk register
 - Stakeholder register
- .5 Enterprise environmental factors
- .6 Organizational process assets

Tools & Techniques

- .1 Expert judgment
- .2 Data gathering
 - Market research
- .3 Data analysis
 - Make-or-buy 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
 - Lessons learned register
 - Milestone list
 - Requirements documentation
 - Requirements traceability matrix
 - Risk register
 - Stakeholder register
- .10 Organizational process assets updates

Conduct Procurements

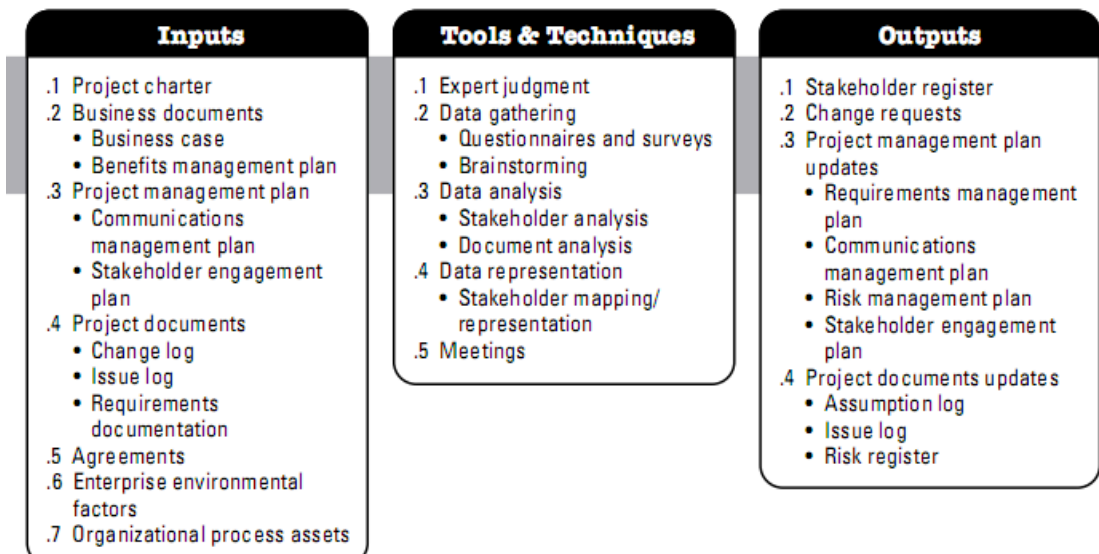
Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project management plan <ul style="list-style-type: none"> • Scope management plan • Requirements management plan • Communications management plan • Risk management plan • Procurement management plan • Configuration management plan • Cost baseline .2 Project documents <ul style="list-style-type: none"> • Lessons learned register • Project schedule • Requirements documentation • Risk register • Stakeholder register .3 Procurement documentation .4 Seller proposals .5 Enterprise environmental factors .6 Organizational process assets 	<ol style="list-style-type: none"> .1 Expert judgment .2 Advertising .3 Bidder conferences .4 Data analysis <ul style="list-style-type: none"> • Proposal evaluation .5 Interpersonal and team skills <ul style="list-style-type: none"> • Negotiation 	<ol style="list-style-type: none"> .1 Selected sellers .2 Agreements .3 Change requests .4 Project management plan updates <ul style="list-style-type: none"> • Requirements management plan • Quality management plan • Communications management plan • Risk management plan • Procurement management plan • Scope baseline • Schedule baseline • Cost baseline .5 Project documents updates <ul style="list-style-type: none"> • Lessons learned register • Requirements documentation • Requirements traceability matrix • Resource calendars • Risk register • Stakeholder register .6 Organizational process assets updates

Control Procurements

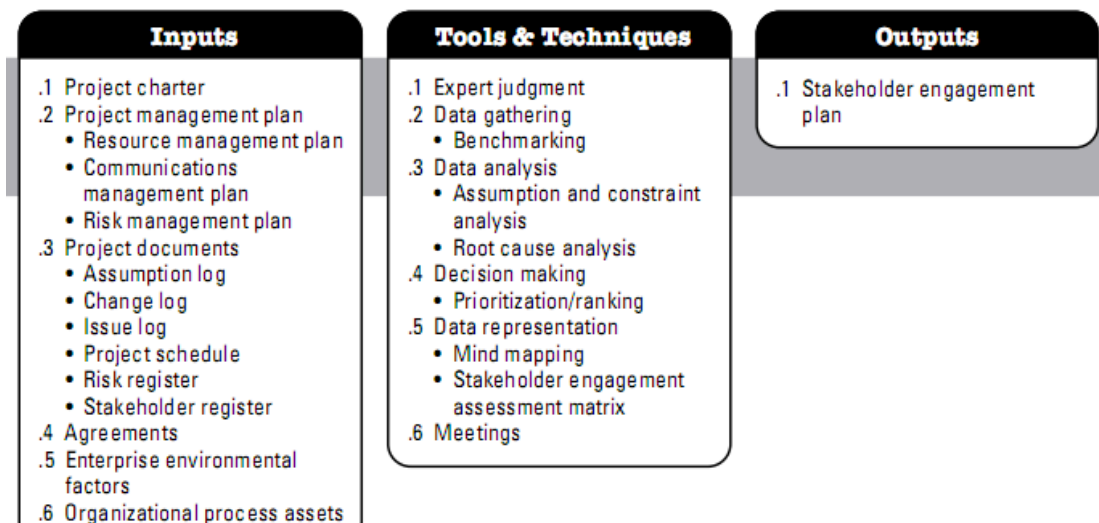
Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project management plan <ul style="list-style-type: none"> • Requirements management plan • Risk management plan • Procurement management plan • Change management plan • Schedule baseline .2 Project documents <ul style="list-style-type: none"> • Assumption log • Lessons learned register • Milestone list • Quality reports • Requirements documentation • Requirements traceability matrix • Risk register • Stakeholder register .3 Agreements .4 Procurement documentation .5 Approved change requests .6 Work performance data .7 Enterprise environmental factors .8 Organizational process assets 	<ol style="list-style-type: none"> .1 Expert judgment .2 Claims administration .3 Data analysis <ul style="list-style-type: none"> • Performance reviews • Earned value analysis • Trend analysis .4 Inspection .5 Audits 	<ol style="list-style-type: none"> .1 Closed procurements .2 Work performance information .3 Procurement documentation updates .4 Change requests .5 Project management plan updates <ul style="list-style-type: none"> • Risk management plan • Procurement management plan • Schedule baseline • Cost baseline .6 Project documents updates <ul style="list-style-type: none"> • Lessons learned register • Resource requirements • Requirements traceability matrix • Risk register • Stakeholder register .7 Organizational process assets updates

PROJECT STAKEHOLDER MANAGEMENT

Identify Stakeholders



Plan Stakeholder Engagement



Manage Stakeholder Engagement

Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project management plan <ul style="list-style-type: none"> • Communications management plan • Risk management plan • Stakeholder engagement plan • Change management plan .2 Project documents <ul style="list-style-type: none"> • Change log • Issue log • Lessons learned register • Stakeholder register .3 Enterprise environmental factors .4 Organizational process assets 	<ol style="list-style-type: none"> .1 Expert judgment .2 Communication skills <ul style="list-style-type: none"> • Feedback .3 Interpersonal and team skills <ul style="list-style-type: none"> • Conflict management • Cultural awareness • Negotiation • Observation/conversation • Political awareness .4 Ground rules .5 Meetings 	<ol style="list-style-type: none"> .1 Change requests .2 Project management plan updates <ul style="list-style-type: none"> • Communications management plan • Stakeholder engagement plan .3 Project documents updates <ul style="list-style-type: none"> • Change log • Issue log • Lessons learned register • Stakeholder register

Monitor Stakeholder Engagement

Inputs	Tools & Techniques	Outputs
<ol style="list-style-type: none"> .1 Project management plan <ul style="list-style-type: none"> • Resource management plan • Communications management plan • Stakeholder engagement plan .2 Project documents <ul style="list-style-type: none"> • Issue log • Lessons learned register • Project communications • Risk register • Stakeholder register .3 Work performance data .4 Enterprise environmental factors .5 Organizational process assets 	<ol style="list-style-type: none"> .1 Data analysis <ul style="list-style-type: none"> • Alternatives analysis • Root cause analysis • Stakeholder analysis .2 Decision making <ul style="list-style-type: none"> • Multicriteria decision analysis • Voting .3 Data representation <ul style="list-style-type: none"> • Stakeholder engagement assessment matrix .4 Communication skills <ul style="list-style-type: none"> • Feedback • Presentations .5 Interpersonal and team skills <ul style="list-style-type: none"> • Active listening • Cultural awareness • Leadership • Networking • Political awareness .6 Meetings 	<ol style="list-style-type: none"> .1 Work performance information .2 Change requests .3 Project management plan updates <ul style="list-style-type: none"> • Resource management plan • Communications management plan • Stakeholder engagement plan .4 Project documents updates <ul style="list-style-type: none"> • Issue log • Lessons learned register • Risk register • Stakeholder register