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ملحق للـ PMP (6th ed)

هذا الملحق تابع لكتاب "كيفية دراسة الـ PMP" إلا أن الكتاب يتعرض لتفاصيل الإصدار الخامس من الـ PMP، وأما هذا الملحق فيتعرض لتفاصيل الإصدار السادس.

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جميع الحقوق محفوظة

نسخة إلكترونية دون فواصل

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فهرس المحتویات

3	المقدمة.....
5	الباب الأول - مجموعة عمليات إدارة المشروع (PMP 6 th ed).....
6	الباب الثاني - الاختصارات في هذا الملحق.....
7	الباب الثالث - جدول الأدوات والأساليب (Tools & Techniques).....
14	الباب الرابع - جدول الخطط (Plans).....
16	الباب الخامس - جدول الوثائق (Documents).....
22	الباب السادس - قائمة العمليات.....
56	الباب السابع - قائمة المصطلحات في الـ PMP.....

المقدمة

هذا الملحق تابع لكتاب "كيفية دراسة الـ PMP" إلا أن الكتاب يتعرض لتفصيلات الإصدار الخامس من الـ PMP، وأما هذا الملحق فيتعرض لتفصيلات الإصدار السادس. ولكن معلومات ومفاهيم الكتاب فيما يتعلق بكيفية دراسة الـ PMP، وكيفية تحليل أسئلة الامتحان والإجابة عليها تنطبق على الإصدار السادس كما الإصدار الخامس، ولذا فإننا لم نتعرض لهذا الموضوع في الملحق، وعلى القارئ الرجوع إلى الكتاب للنظر فيه.

وكذلك وضعنا في الكتاب الملاحظات المتعلقة بالترابط في عمليات الإصدار الخامس (في نهاية الفصل الرابع من الكتاب). وهذه الملاحظات تساعد في رفع مهارة " الانتباه والتساؤل" عن أسباب الترابط. وهذه الملاحظات مفيدة جدا في الانتباه لترابط عمليات الإصدار السادس (مع التنبيه لوجود بعض الاختلافات بين ترابط عمليات الإصدار السادس وعمليات الإصدار الخامس).

وأما في هذا الملحق فقد وضعنا مجموعة من المصطلحات المتعلقة بالإصدار السادس في الباب السابع (وهو يكافئ الفصل الثالث من الكتاب)، ووضعنا قائمة العمليات في الباب السادس (وهو يكافئ الفصل الرابع من الكتاب).

وقد أضفنا في هذا الملحق ثلاثة مواضيع: جدول الأدوات والأساليب (الباب الثالث)، وجدول الخطط (الباب الرابع)، وجدول الوثائق (الباب الخامس).

وقد قمنا بترتيب مجموعات الأساليب ضمن التالي:

Data Gathering, Data Representation, Data Analysis, Decision making,

Communication Skills, Interpersonal and Team Skills, General T&T.

وأما الأساليب نفسها فقد وضعناها في مجموعاتها حسب الترتيب الأبجدي. وكذلك وضعنا الخطط والوثائق حسب ترتيبها الأبجدي.

ومن الضروري التنبيه أننا وضعنا ضمن الوثائق الأمور التالية:

Deliverables, Verified Deliverables, Accepted Deliverables, Final

Product/Outcome.

وهذه بالطبع ليست وثائق، ولكن من المؤكد أن يُصاحبها عدة وثائق ومستندات تتعلق بتقارير الفحص، وشهادات الإنشاء، وكتب الاعتماد، ومذكرات (إشعارات) التسليم، وشهادات القبول والموافقة، وإيصالات الشحن، إلخ.

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الباب الأول – مجموعة عمليات إدارة المشروع (PMP 6th ed)

Project Management Group Processes مجموعات عمليات إدارة المشروع					
Knowledge Areas الإدارات التخصصية	Initiating (I.) الابتداء	Planning (P.) التخطيط	Execution (E.) التنفيذ	Monitor & Control (MC.) الإشراف والضبط	Closing الانتهاء
1-Integration (Integ.) التنسيق والتكامل	Develop _Charter	Develop Plan	Direct & Manage Work Manage Knowledge	MC PICC	Close
2-Scope المجال / النطاق		Plan Collect Requirements Define Scope Create WBS		Validate Control	
3-Schedule (T.) الجدول الزمني		Plan Define Activities Sequence Activities Estimate Duration Develop Schedule		Control	
4-Cost الكلفة		Plan Estimate Cost Determine Budget		Control	
5-Quality (Q.) الجودة		Plan	Manage	Control	
6-Resource Management (Rc.) إدارة الموارد		Plan Estimate	Acquire Develop Team Manage Team	Control	
7-Communications (Comm.) التواصل		Plan	Manage	Monitor	
8-Risk المخاطر		Plan Identify Qualitative Analysis Quantitative Analysis Plan Responses	Implement Risk _Responses	Monitor	
9-Procurement (Proc.) اللوازم والمشتريات		Plan	Conduct	Control	
10-Stakeholder (Stkh.) المعنيون	Identify	Plan	Manage Engagement	Monitor _Engagement	

الباب الثاني - الاختصارات في هذا الملحق

Initiation = I.

Planning= P.

Execution = E.

Monitoring & Control = MC.

Closing = Close.

Project Integration Management = Integ.

Project Scope Management = Scope.

Project Schedule Management = T.

Project Cost Management = Cost.

Project Quality Management = Q.

Project Resource Management = Rc.

Project Communication Management = Comm.

Project Risk Management = Risk

Project Procurement Management = Proc.

Project Stakeholder Management = Stkh.

T&T = Tools & Techniques

EEF = Enterprise Environmental Factors

OPA = Organizational Process Assets

W.P = Work Performance

Reqs. = Requirements

Doc.= Documents

وانتبه ... Scope.P2 هي عملية التخطيط الثانية في الـ Scope Management، ومن مراجعة الجدول في الباب الأول فإن هذه العملية هي Collect Requirements. وكذلك فإن Rc.P3 هي عملية التخطيط الثالثة في الـ Resource Management، إلخ.

الباب الثالث – جدول الأدوات والأساليب (Tools & Techniques)

Data Gathering	Project Processes
Benchmarking Comparing actual or planned practices/standards to those of comparable organizations/projects to identify best practices, ideas for improvements, and to provide a basis for measuring performance.	Scope.P2, Q.P, Risk.P2, Stkh.P
Brainstorming	Integ.I, Integ.P, Scope.P2, Q.P, Stkh.I
Check Sheets Tally Sheets, Table (form) for collecting data.	Q.MC
Checklists List of items to be considered.	Q.E, Q.MC, Risk.P2
Focus Groups Prequalified members.	Integ.I, Integ.P, Scope.P2
Delphi technique Anonymous data gathering.	
Interviews	Integ.I, Integ.P, Scope.P2, Q.P, Risk.P2, Risk.P3, Risk.P4, Risk.P5
Market Research	Proc.P
Questionnaire and Surveys	Scope.P2, Q.MC, Stkh.I
Statistical Sampling Attribute Sampling ((yes/No) Variable Sampling (Quantity).	Q.MC

Data Representation	Project Processes
Affinity Diagrams (Classification of ideas).	Scope.P2, Q.E
Cause and Effect Diagrams	Q.E, Q.MC
Control Charts	Q.MC
Flow Charts Representation of series of steps	Q.P, Q.E
Hierarchical Charts (Eg: Parent-child charts).	Rc.P1, Risk.P3
Histograms Graphical representation of numerical data.	Q.E, Q.MC
Logical Data Model Visual representation of data	Q.P
Matrix Diagram Multicriteria Analysis, eg: Quality function deployment, , Probability and Impact Matrix.	Q.P, Q.E
Mind Mapping (Linking ideas)	Scope.P2, Stkh.P

Cont. Data Representation	Project Processes
Probability and Impact Matrix	Risk.P3
Responsibility Assignment Matrix Eg: Raci (Responsible, Accountable, Consult, Inform).	Rc.P1
Scatter Diagrams Graph that shows the relationship between two variable.	Q.E, Q.MC
Stakeholder Engagement Assignment Matrix Unaware, resistance, neutral, supportive, leading.	Comm.P, Comm.MC, Stkh.P, Stkh.MC
Stakeholder Mapping	Stkh.I
Text-Oriented Formats Examples: Role-responsibility-authority Form, position/Job descriptions.	Rc.P1

Data Analysis	Project Processes
Alternative Analysis Generate & evaluate available options and identify the best possible one.	Integ.MC1, Integ.MC2, Scope.P1, Scope.P3, T.P1, T.P4, Cost.P1, Q.E, Rc.P2, Rc.MC, Risk.P5, Stkh.MC
Assumption and Constraint Analysis	Risk.P2, Stkh.P
Cost of Quality prevention costs, appraisal costs, failure costs.	Cost.P2, Q.P
Cost-Benefit Analysis	Integ.MC1, Integ.MC2, Q.P, Rc.MC, Risk.P5
Decision Tree Analysis	Risk.P4
Document Analysis	Integ.Close, Scope.P2, Q.E, Risk.P2, Stkh.I
Earned Value Analysis Integrated perspective on scope, schedule and cost performance.	Integ.MC1, T.MC, Cost.MC, Proc.MC
Influence Diagrams	Risk.P4
Iteration Burndown Chart The chart track the work that remains to be completed in the iteration backlog.	T.MC
Make-or-Buy Analysis	Proc.P
Performance Reviews Compare actual performance/work against approved plans.	T.MC, Q.MC, Rc.MC, Proc.MC
Process Analysis To identify current problems/constraints/non-value-added activities, and possible improvements.	Q.E
Proposal Evaluation	Proc.E
Regression Analysis	Integ.Close

Cont. Data Analysis	Project Processes
Reserve Analysis Analyzing the contingency and management reserve needed for the project.	T.P4, Cost.P2, Cost.P3, Cost.MC, Risk.MC
Risk Analysis: Risk Data Quality Assessment Risk Probability and Impact Assessment Assessment of Other Risk Parameters.	Risk.P3
Root Cause Analysis To identify the true main causes of a variance, defect, risk, etc.	Integ.MC1, Q.E, Q.MC, Risk.P2, Stkh.P, Stkh.MC
Sensitivity Analysis	Risk.P4
Simulation	T.P5, Risk.P4
Stakeholder Analysis	Risk.P1, Stkh.I, Stkh.MC
SWOT Analysis	Risk.P2
Technical Performance Analysis	Risk.MC
Trend Analysis Forecast the future based on past data.	Integ.MC1, Integ.Close, Scope.MC2, T.MC, Cost.MC, Rc.MC, Proc.MC
Variance Analysis Reviews and analyses the differences between planned and actual performance.	Integ.MC1, Integ.Close, Scope.MC2, T.MC, Cost.MC
What-if Scenario Analysis	T.P5, T.MC

Decision making	Project Processes
Autocratic decision making	Integ.MC2, Scope.P2
Multicriteria decision making	Integ.MC2, Scope.P2, Scope.P3, Q.P, Q.E, Rc.E1, Risk.P5, Stkh.MC
Prioritization/Ranking	Stkh.P
Voting Unanimity, Majority, Plurality.	Integ.MC1, Integ.MC2, Scope.P2, Scope.MC1, T.P4, Cost.P2, Stkh.MC

Communication Skills	Project Processes
Communication Competence	Comm.E
Feedback	Comm.E, Stkh.E, Stkh.MC
Nonverbal	Comm.E
Presentations	Comm.E, Stkh.MC

Interpersonal and Team Skills	Project Processes
Active Listening	Integ.E2, Comm.E, Stkh.MC
Communication Styles Assessments	Comm.P
Conflict Management	Integ.I, Integ.P, Rc.E2, Rc.E3, Comm.E, Stkh.E
Cultural Awareness	Comm.P, Comm.E, Stkh.E, Stkh.MC
<p>Decision Making Focus of goals to be served, follow a decision making process, study the environmental factors, analyze available information, stimulate team creativity, and account for risk.</p>	Rc.E3
Emotional Intelligence	Rc.E3
<p>Facilitating: Facilitated workshops Joint application design/development (JAD) Quality function deployment User stories, etc.</p>	Integ.I, Integ.P, Integ.E2, Scope.P3, Risk.P2, Risk.P3, Risk.P4, Risk.P5
Influencing	Rc.E2, Rc.E3, Rc.MC, Risk.E
Leadership	Integ.E2, Rc.E3, Stkh.MC
<p>Meeting Management Agenda, Invitation, Feedback, minutes of meeting, follow-up, etc.</p>	Integ.I, Integ.P, Comm.E
Motivation	Rc.E2
Negotiation	Rc.E1, Rc.E2, Rc.MC, Proc.E, Stkh.E
Networking	Integ.E2, Comm.E, Stkh.MC
<p>Nominal Group Techniques Ranking ideas through voting.</p>	Scope.P2
<p>Observation/Conversation Job shadowing.</p>	Scope.P2, Comm.MC, Stkh.E
Political Awareness	Integ.E2, Comm.P, Comm.E, Stkh.E, Stkh.MC
Team Building	Rc.E2

General T&T	Project Processes
Advertising	Proc.E
Agile Release Planning	T.P5
Audits Structured and independent process used to determine if activities comply with the adopted policies, processes and procedures.	Q.E, Risk.MC, Proc.MC
Bidder conferences	Proc.E
Change Control Tools	Integ.MC2
Claims Administration	Proc.MC
Co-Location	Rc.E2
Communication Methods Interactive, push, pull.	Comm.P, Comm.E
Communication Models Encode, decode, medium, noise, acknowledgment, feedback/response.	Comm.P
Communication Requirement Analysis	Comm.P
Communication Technology Shared portal, video conferencing, audio conferencing, emails, chatting, etc.	Rc.E2, Comm.P, Comm.E
Context Diagrams Linking people, process, and objects.	Scope.P2
Contingent Response Strategies	Risk.P5
Cost Aggregation	Cost.P3
Critical Chain Method	T.P5
Critical Path Method	T.P5, T.MC
Decomposition Dividing and subdividing an object (eg: work, scope, deliverables, etc).	Scope.P4, T.P2
Dependency Determination	T.P3
Design For X	Q.E
Estimation Techniques: Analogous Estimating Parametric Estimating Three-point Estimating Bottom-up Estimating.	T.P4, Cost.P2, Rc.P2

Cont. General T&T	Project Processes
Expert Judgment	Integ.I, Integ.P, Integ.E1, Integ.E2, Integ.MC1, Integ.MC2, Integ.Close, Scope.P1, Scope.P2, Scope.P3, Scope.P4, T.P1, T.P2, T.P4, Cost.P1, Cost.P2, Cost.P3, Cost.MC, Q.P, Rc.P1, Rc.P2, Comm.P, Comm.MC, Risk.P1, Risk.P2, Risk.P3, Risk.P4, Risk.P5, Risk.E, Proc.P, Proc.E, Proc.MC, Stkh.I, Stkh.P, Stkh.E
Financing	
Forecasting Techniques	Cost.MC
Funding Limit Reconciliation	Cost.P3
Ground Rules Agreements and expectations regarding the acceptable behavior by the team.	Stkh.E
Historical Information Reviews	Cost.P3
Individual and Team Assignments	Rc.E2
Information Management tools and techniques of obtaining, recording, storing and searching for information.	Integ.E2
Inspection Examination of a work product to determine if it conforms to documented standards.	Scope.MC1, Q.MC, Proc.MC
Knowledge Management Networking, communities of practice, meetings, work/reverse shadowing, discussion forums, knowledge sharing events, workshops, creativity techniques, knowledge fairs and cafes, training.	Integ.E2
Leads and Lags	T.P3, T.P5, T.MC
Meetings Initiation meeting, kick-off meetings, status/progress meetings, stakeholder meetings, change control meetings, review meetings, hand-over meetings, approval/acceptance meetings, decision making meetings, information sharing meetings, etc.	Integ.I, Integ.P, Integ.E1, Integ.MC1, Integ.MC2, Integ.Close, Scope.P1, T.P1, T.P2, T.P4, Cost.P1, Q.P, Q.MC, Rc.P1, Rc.P2, Rc.E2, Comm.P, Comm.E, Comm.MC, Risk.P1, Risk.P2, Risk.P3, Risk.MC, Proc.P, Stkh.I, Stkh.P, Stkh.E, Stkh.MC
Modeling Techniques	T.MC
Organizational Theory	Rc.P1
Pre-Assignment	Rc.E1
Precedence Diagramming Method (PDM),	T.P3
Problem Solving Identify the problem, Define the problem, Investigate, Analyze, Solve, Check the solution.	Q.E, Rc.MC

Cont. General T&T	Project Processes
Product Analysis product Breakdown, Requirements analysis, system analysis, system engineering, value analysis, value engineering.	Scope.P3
Project MIS	Integ.E1, T.P3, T.P5, T.MC, Cost.P2, Cost.MC, Rc.P2, Rc.E3, Rc.MC, Comm.E, Comm.MC, Risk.E
Project Reporting The act of collecting and distributing project information.	Comm.E
Prompt Lists	Risk.P2
Prototypes Model of the expected product/result.	Scope.P2
Quality Improvement Methods	Q.E
Recognition and Rewards	Rc.E2
Representation of Uncertainty	Risk.P4
Resource Optimizing	T.P5, T.MC
Risk Categorization	Risk.P3
Risk Strategies: Contingent Response Strategies Strategies For Opportunities Strategies for Overall Project Risk Strategies For Threats.	Risk.P5
Rolling Wave Planning	T.P2
Schedule Compression	T.P5, T.MC
Schedule Network Analysis	T.P5
Source Selection Analysis Least cost, qualifications only, quality-based/highest technical proposal score, quality and cost based, sole source, fixed budget.	Proc.P
TCPI	Cost.MC
Test and Inspection Planning	Q.P
Testing/Product Evaluation An organized and constructed investigation conducted to provide objective information about the quality of the product/service under test in accordance with the project requirements	Q.MC
Training	Rc.E2
Virtual Teams	Rc.E1, Rc.E2

الباب الرابع - جدول الخطط (Plans)

Plans	Output Of	Input To	Updated At
Benefits Management Plan	Sponsor/Integ.I	Integ.Close, Cost.P3, Proc.P, Stkh.I,	
Change Management Plan	Integ.P	Integ.MC2, Scope.MC2, Proc.MC, Stkh.E	
Communication Management Plan	Comm.P	Integ.P, Comm.E, Comm.MC, Proc.E, Stkh.I, Stkh.P, Stkh.E, Stkh.MC	Comm.E, Comm.MC, Proc.E, Stkh.I, Stkh.E, Stkh.MC,
Configuration Management Plan	Integ.P	Integ.MC2, Scope.MC2, Proc.E	
Cost Baseline	Cost.P3 (Determine)	Integ.P, Integ.MC2, Cost.MC, Rc.E1, Risk.P2, Risk.P4, Risk.P5, Proc.E	Scope.MC2, T.P2, T.P5, T.MC, Cost.MC, Q.E, Rc.E1, Rc.E3, Rc.MC, Risk.P5, Proc.E, Proc.MC,
Cost Management Plan	Cost.P1	Integ.P, Cost.P2, Cost.P3, Cost.MC, Risk.P2	Cost.MC, Risk.P5,
Development Approach	Integ.P	Scope.P1, T.P1	
Performance Measurement Baseline	Integ.P	Scope.MC2, T.MC, Cost.MC	Scope.MC2, T.MC, Cost.MC,
Procurement Management Plan	Proc.P	Integ.P, Rc.E1, Proc.E, Proc.MC	Risk.P5, Proc.E, Proc.MC
Project Life-Cycle Description	Integ.P	Scope.P1	
Quality Management Plan	Q.P	Integ.P, Scope.P1, Cost.P2, Q.E, Q.MC, Rc.P1, Risk.P2, Proc.P	Q.E, Q.MC, Risk.P5, Proc.E
Requirements Management Plan	Scope.P1	Integ.P, Scope.P2, Scope.MC1, Scope.MC2, Q.P, Risk.P2, Proc.E, Proc.MC	Proc.E, Stkh.I

Plans	Output Of	Input To	Updated At
Resource Management Plan	Rc.P1	Cost.P3, Rc.P2, Rc.E1, Rc.E2, Rc.E3, Rc.MC, Comm.P, Comm.E, Comm.MC, Risk.P2, Risk.P5, Proc.P, Stkh.P, Stkh.MC	Rc.E1, Rc.E2, Rc.E3, Rc.MC, Risk.P5, Stkh.I, Stkh.MC
Risk Management Plan	Risk.P1	Integ.P, Cost.P1, Q.P, Risk.P2, Risk.P3, Risk.P4, Risk.P5, Risk.E, Risk.MC, Proc.E, Proc.MC, Stkh.P, Stkh.E	Q.P, Proc.E, Proc.MC
Schedule Baseline	T.P5 (Develop)	Integ.P, Integ.MC2, T.MC, Risk.P2, Risk.P4, Proc.MC	Scope.MC2, T.P2, T.MC, Q.E, Rc.E3, Rc.MC, Risk.P5, Proc.E, Proc.MC
Schedule Management Plan	T.P1	Integ.P, T.P2, T.P3, T.P4, T.P5, T.MC, Cost.P1, Risk.P2	T.P5, T.MC, Risk.P5
Scope Baseline	Scope.P4 (Create)	Integ.P, Integ.MC2, Scope.MC1, Scope.MC2, T.P2, T.P3, T.P4, T.P5, T.MC, Cost.P2, Cost.P3, Q.P, Rc.P1, Rc.P2, Risk.P2, Risk.P4, Proc.P	Scope.MC2, Q.P, Q.E, Risk.P5, Proc.E
Scope Management Plan	Scope.P1	Integ.P, Scope.P2, Scope.P3, Scope.P4, Scope.MC1, Scope.MC2, T.P1, Proc.P, Proc.E	Scope.MC2
Stakeholder Engagement Plan	Stkh.P	Integ.P, Scope.P2, Q.P, Comm.P, Comm.E, Comm.MC, Stkh.I, Stkh.E, Stkh.MC	Comm.P, Comm.E, Comm.MC, Stkh.I, Stkh.E, Stkh.MC

الباب الخامس - جدول الوثائق (Documents)

Documents	Output Of	Input To	Updated At
Accepted Deliverables	Scope.MC1	Integ.Close	
Activity Attributes Additional information describing the project activities in the activity list.	T.P2 (Define)	T.P3, T.P4, T.P5, Rc.P2	T.P3, T.P4, T.P5, Rc.P2
Activity List List of the activities required on the project.	T.P2 (Define)	T.P3, T.P4, T.P5, Rc.P2	Integ.E1, T.P3
Agreements	Sponsor/Customer Proc.E (Conduct)	Integ.I, Integ.MC1, Integ.Close, Scope.P2, Cost.P3, Rc.MC, Risk.P2, Proc.MC, Stkh.I, Stkh.P	
Approved Change Requests	Integ.MC2 (PICC)	Integ.E1, Q.MC, Proc.MC	
Assumption Log Records of assumptions and constraints throughout the project life-cycle.	Integ.I	Integ.MC1, Integ.Close, Scope.P2, Scope.P3, T.P3, T.P4, T.P5, Q.P, Rc.P2, Risk.P2, Risk.P3, Risk.P4, Proc.MC, Stkh.P	Integ.E1, Scope.P3, Scope.P4, T.P3, T.P4, T.P5, T.MC, Cost.P2, Cost.MC, Rc.P1, Rc.P2, Rc.MC, Risk.P2, Risk.P3, Risk.P5, Risk.MC, Stkh.I
Basis of Estimates Additional information related to the time and cost estimation.	T.P4 (Estimate), Cost.P2 (Estimate), Rc.P2 (Estimate)	Integ.MC1, Integ.MC2, Integ.Close, T.P5, Cost.P3, Risk.P4	T.MC, Cost.MC
Business Case business need, business objectives, feasibility study, etc.).	Sponsor/Customer	Integ.I, Integ.Close, Scope.P2, Cost.P3, Proc.P, Stkh.I	

Documents	Output Of	Input To	Updated At
Change Log List of changes submitted during the project and their current status.	Stkh.E (Manage)	Integ.E1, Integ.Close, Comm.E, Stkh.I, Stkh.P, Stkh.E	Integ.MC2, Stkh.E
Change Requests	All MC Except Integ.MC2. Integ.E1, T.P2, T.P5, Q.E, Rc.E1, Rc.E3, Risk.P5, Risk.E, Proc.P, Proc.E, Stkh.I, Stkh.E	Integ.MC2	
Closed Procurements	Proc.MC	Final Reports / Project Files.	
Cost Estimates	Cost.P2 (Estimate)	Cost.P3, Rc.P2, Risk.P2, Risk.P4	Cost.P3, Cost.MC
Cost Forecasts Predictions of future cost estimates based on the current available information.	Cost.MC	Integ.MC1, Risk.P4	Integ.MC1, Risk.P5
Deliverables	Integ.E1 (Work)	Integ.E2, Q.MC	
Duration Estimates	T.P4 (Estimate)	T.P5, Risk.P2, Risk.P4	T.P5
Final Product/Outcome	Integ.Close	Sponser / Customer	
Final Report	Integ.Close	Company Files	
Issue Log List of issues (as conflict or disagreement) that took place within the project team. This log can be used to monitor and track these issues, and identify the personnel for resolving these issues by a targeted date (issue type, who raised the issue, description, priority, who assigned to the issue, target resolution date, status, final solution).	Integ.E1 (Work)	Integ.MC1, Integ.Close, Rc.E3, Rc.MC, Comm.E, Comm.MC, Risk.P2, Risk.MC, Stkh.I, Stkh.P, Stkh.E, Stkh.MC	Integ.MC1, Q.E, Q.MC, Rc.E3, Rc.MC, Comm.E, Comm.MC, Risk.P2, Risk.P3, Risk.E, Risk.MC, Stkh.I, Stkh.E, Stkh.MC,

Documents	Output Of	Input To	Updated At
Lessons Learned Register	Integ.E2 (Know)	All MC Except Integ.MC2. Integ.E1, Integ.E2 (Know), Integ.Close, Scope.P2, T.P4, T.P5, Cost.P2, Q.E, Comm.E, Risk.P2, Risk.P5, Risk.E, Proc.E, Stkh.E.	All MC Except Integ.MC2. Integ.E1, Integ.Close, T.P(4,5), Cost.P2, Q.P, Q.E, Rc.P2, Rc.E (1-3), Comm.E, Risk.P2, Risk.P5, Risk.E, Proc.P, Proc.E, Stkh.E
Milestone List Schedule dates for specific milestones (which are significant point in the project).	T.P2 (Define)	Integ.E1, Integ.MC1, Integ.Close, T.P3, T.P4, T.P5, Risk.P4, Proc.P, Proc.MC	T.P3, Proc.P
Physical Resource Assignments Documentation of the material, equipment, supplies, locations and other physical resources that will be used during the project.	Rc.E1 (Acquire)	Rc.MC	Rc.MC
<u>Procurement Documents</u> Procurement Strategy Bid Documents Proc. Statement of Work Source selection criteria Make-or-buy decisions Independent Cost Estimates.	Proc.P	Integ.Close, Risk.P2, Proc.E, Proc.MC	
Project Calendars Working days (or parts of days) and shifts that are available for scheduled activities	T.P5 (Develop)	T.MC	

Documents	Output Of	Input To	Updated At
Project Charter	Integ.I	Integ.P, Integ.Close, Scope.P1, Scope.P2, Scope.P3, T.P1, Cost.P1, Comm.P, Rc.P1, Risk.P1, Proc.P, Stkh.I	
Project Communications	Comm.E (Manage)	Integ.E1, Integ.Close, Comm.MC, Stkh.MC	
Project Funding Requirements	Cost.P3 (Determine)	Cost.MC	
Project Schedule List of activities, their duration, resources, and planned start and finish dates.	T.P5 (Develop)	Integ.E1, T.MC, Cost.P2, Cost.P3, Rc.P1, Rc.E1, Rc.E2, Rc.MC, Risk.P5, Proc.E, Stkh.P	T.MC, Cost.P3, Rc.E1, Rc.E2, Comm.P, Comm.E, Risk.P5
Project schedule Network D.	T.P3 (Sequence)	T.P5	
Project Scope Statement Scope description, deliverables, acceptance criteria, exclusions.	Scope.P3 (Define)	Scope.P4	
Project Team Assignments Team member roles and responsibilities.	Rc.E1 (Acquire)	Integ.E2 (Know), T.P4, T.P5, Rc.E2, Rc.E3, Risk.P5, Proc.P	Rc.E2, Rc.E3, Risk.P5, Risk.E
Quality Control Measurements	Q.MC	Integ.Close, Q.E	
Quality Metrics	Q.P	Q.E, Q.MC	
Quality Reports	Q.E (Manage)	Integ.MC1, Integ.Close, Scope.MC1, Comm.E, Proc.MC	
Requirements Documentation: Business, stakeholder, solution (functional and non-functional), transition, project and quality requirements.	Scope.P2 (Collect)	Integ.Close, Scope.P3, Scope.P4, Scope.MC1, Scope.MC2, Q.P, Rc.P1, Comm.P, Risk.P2, Proc.P, Proc.E, Proc.MC, Stkh.I	Integ.E1, Scope.P3, Scope.P4, Scope.MC1, Scope.MC2, Proc.P, Proc.E

Documents	Output Of	Input To	Updated At
Requirements Traceability Matrix Links requirements from origin to deliverables through the whole project duration.	Scope.P2 (Collect)	Integ.E1, Integ.MC2, Scope.MC1, Scope.MC2, Q.P, Proc.P, Proc.MC	Scope.P3, Scope.MC1, Scope.MC2, Q.P, Proc.P, Proc.E, Proc.MC
Resource Breakdown Structure	Rc.P2 (Estimate)	Integ.E2 (Know), T.P4, Rc.MC	Rc.E1, Rc.MC
Resource Calendars Time of availability or engagements.	Rc.E1 (Acquire)	T.P4, T.P5, T.MC, Rc.P2, Rc.E1, Rc.E2, Risk.P5	T.MC, Rc.E2, Proc.E
Resource Requirements Needed recourses as employee, material, machine, supplies, etc. (4M).	Rc.P2 (Estimate)	T.P4, T.P5, Cost.P2, Rc.E1, Rc.MC, Risk.P2, Risk.P4, Proc.P	T.P5, Rc.E1, Proc.MC
Risk Register List of identified risks and their attributes.	Risk.P2 (Identify)	Integ.E1, Integ.Close, Integ.MC1, Scope.P3, T.P4, T.P5, Cost.P2, Cost.P3, Q.P, Rc.P1, Rc.P2, Rc.MC, Risk.P3, Risk.P4, Risk.P5, Risk.E, Risk.MC, Proc.P, Proc.E, Proc.MC, Stkh.P, Stkh.MC	Integ.E1, Integ.MC1, T.P5, T.MC, Cost.P2, Cost.P3, Cost.MC, Q.P, Q.E, Q.MC, Rc.P1, Rc.E1, Rc.MC, Comm.E, Risk.P3, Risk.P5, Risk.E, Risk.MC, Proc.P, Proc.E, Proc.MC, Stkh.I, Stkh.MC
Risk Report Status of the overall project risk.	Risk.P2 (Identify)	Integ.E1, Integ.MC1, Integ.MC2, Integ.Close, Q.E, Comm.E, Risk.P4, Risk.P5, Risk.E, Risk.MC	Risk.P3, Risk.P4, Risk.P5, Risk.E, Risk.MC
Schedule Data Collection of information describing the schedule parameters/attributes.	T.P5 (Develop)	T.MC	T.MC
Schedule Forecasts Predictions of future schedule estimates based on the current available information.	T.MC	Integ.MC1, Risk.P4	Integ.MC1

Documents	Output Of	Input To	Updated At
Selected sellers	Proc.E (Conduct)	Project Files	
Seller proposals	Sellers	Proc.E	
Stakeholder Register List of stakeholders and additional information related to them.	Stkh.I (Identify)	Integ.E2 (Know), Scope.P2, Q.P, Rc.P1, Rc.E1, Comm.P, Comm.E, Risk.P1, Risk.P2, Risk.P3, Proc.P, Proc.E, Proc.MC, Stkh.P, Stkh.E, Stkh.MC	Integ.E1, Scope.P3, Q.P, Comm.P, Comm.E, Comm.MC, Proc.P, Proc.E, Proc.MC, Stkh.E, Stkh.MC
Team Charter Agreed values and behavior, operating guidelines, communication guidelines, decision making process, conflict resolution process, meeting guidelines, and any other team. agreements.	Rc.P1 (Plan)	Rc.E2, Rc.E3	Rc.E2
Team Performance Assessments	Rc.E2 (Develop)	Rc.E3	
Test and Evaluation Documents	Q.E (Manage)	Q.MC	Q.MC
Verified Deliverables	Q.MC	Scope.MC1	
Work Performance Data	Integ.E1 (Work)	All MC Except Integration.	
Work Performance Information	All MC Except Integration.	Integ.MC1	
Work Performance Report	Integ.MC1	Integ.MC2, Rc.E3, Comm.E, Risk.MC	

Integ.MC1 - Monitor and Control Project Work (PMBOK 4.5)

From	Inputs	Tools & Techniques
Project Files	Project Management Plan Any Component	Data Analysis (<u>Alternative Analysis, Cost-Benefit Analysis, Earned Value Analysis, Root Cause Analysis, Trend Analysis, Variance Analysis</u>),
Project Files Integ.I T.P4, Cost.P2, Rc.P2 Cost.MC Integ.E1 (Work) Integ.E2 (Know) T.P2 (Define) Q.E (Manage) Risk.P2 (Identify) Risk.P2 (Identify) T.MC	Project Documents Assumption Log Basis of Estimates Cost Forecasts Issue Log Lessons Learned Register Milestone List Quality Reports Risk Register Risk Report Schedule Forecasts	Decision making (<u>Voting</u>), Expert judgment, Meetings.
Sponsor/Customer Proc.E (Conduct)	Agreements	
MC Processes	W.P Information	
Company Files	EEF & OPA	
Output	To	
Change Requests	Integ.MC2 (PICC)	
W.P Report	Integ.MC2, Rc.E3, Comm.E, Risk.MC	
Project Plan Updates	Any Component	
Project Doc Updates	Cost forecasts, Issue Log, Lessons Learned Register, Risk Register, Schedule Forecast	

Integ.MC2 - Perform Integrated Change Control (PICC) (PMBOK 4.6)

From	Inputs	T & T
Project Files Integ.P Integ.P Cost.P3 (Determine) T.P5 (Develop) Scope.P4 (Create)	Project Management Plan Change Management Plan Config. Management Plan Cost Baseline Schedule Baseline Scope Baseline	Data Analysis (<u>Alternative Analysis, Cost-Benefit Analysis</u>), Decision Making (<u>Voting, Autocratic decision making, Multicriteria decision making</u>),
Project Files T.P4, Cost.P2, Rc.P2 Scope.P2 (Collect) Risk.P2 (Identify)	Project Documents Basis of Estimates Reqs. Traceability Matrix Risk Report	Expert judgment, Change Control Tools, Meetings.
Many Processes	Change Requests	
Integ.MC1	W.P Report	
Company Files	EEF & OPA	
Output		To
Approved Change Requests.	Integ.E1, Q.MC, Proc.MC	
Project Plan Updates	Any Component	
Project Doc Updates	Change Log	

Integ.Close - Close Project or Phase (PMBOK 4.7)

From	Inputs	T & T
Integ.I	Project Charter.	
Project Files	Project Management Plan Any Component	Data Analysis (<u>Document analysis, Regression analysis, Trend analysis, Variance analysis</u>),
Project Files Integ.I T.P4, Cost.P2, Rc.P2 Stkh.E (Manage) Integ.E1 (Work) Integ.E2 (Know) T.P2 (Define) Comm.E (Manage) Q.MC Q.E (Manage) Scope.P2 (Collect) Risk.P2 (Identify) Risk.P2 (Identify)	Project Documents Assumption log Basis of estimates Change log Issue log Lessons Learned Register Milestone list Project communications Quality control measurements Quality reports Requirements documentation Risk register Risk report	Expert judgment, Meetings.
Scope.MC1(Validate)	Accepted Deliverables	
Sponsor/Customer	Business Documents Business case Benefits management plan	
Sponsor/Customer Proc.E (Conduct)	Agreements	
Proc.P	Procurement Documents	
Company Files	OPA	
Output	To	
Final Product/Outcome	Customer.	
Final Report.	Project Files (Documents)	
Project Doc Updates	Lessons Learned Register	
OPA Updates	Company Files	

Scope.P3 - Define Scope (PMBOK 5.3)

From	Inputs	T & T
Integ.I.	Project Charter	Data Analysis (<u>Alternative Analysis</u>), Decision Making (<u>Multicriteria Decision Making</u>), Interpersonal and Team Skills (<u>Facilitation</u>), Expert judgment, Product analysis.
Project Files Scope.P1	Project Management Plan Scope Management Plan	
Project Files Integ.I Scope.P2 (Collect) Risk.P2 (Identify)	Project Documents Assumption Log Requirements Documentation Risk Register	
Company Files	OPA	
Output	To	
Project Scope Statement	Scope.P4 (WBS)	
Project Doc Updates	Assumption log, Requirements Documentation, Requirements Traceability Matrix, Stakeholder Register	

Scope.P4 - Create WBS (PMBOK 5.4)

From	Inputs	T & T
Project Files Scope.P1	Project Management Plan Scope Management Plan	Decomposition, Expert Judgment.
Project Files Scope.P3 (Define) Scope.P2 (Collect)	Project Documents Project Scope Statement Requirements Documentation	
Company Files	EEF & OPA	
Output	To	
Scope Baseline	Integ.P, Integ.MC2, Scope.MC1, Scope.MC2, T.P2, T.P3, T.P4, T.P5, T.MC, Cost.P2, Cost.P3, Q.P, Rc.P1, Rc.P2, Risk.P2, Risk.P4, Proc.P	
Project Doc Updates	Assumption log, Requirements Documentation	

Scope.MC1 - Validate Scope (PMBOK 5.5)

From	Inputs	T & T
Project Files Scope.P1 Scope.P4 (Create) Scope.P1	Project Management Plan Reqs. Management Plan Scope Baseline Scope Management Plan	Decision Making (<u>Voting</u>), Inspection.
Project Files Integ.E2 (Know) Q.E (Manage) Scope.P2 (Collect) Scope.P2 (Collect)	Project Documents Lessons Learned Register Quality Reports. Requirements Documentation Reqs. Traceability Matrix	
Q.MC	Verified Deliverables	
Integ.E	W.P Data	
Output	To	
Accepted Deliverables	Integ.Close	
Change Requests	Integ.MC2 (PICC)	
W.P Information	Integ.MC1	
Project Doc Updates	Lessons Learned Register, Requirements Documentation, Requirements Traceability Matrix	

Scope.MC2 - Control Scope (PMBOK 5.6)

From	Inputs	T & T
Project Files Integ.P Integ.P Integ.P Scope.P1 Scope.P4 (Create) Scope.P1	Project Management Plan Change Management Plan Config. Management Plan Performance measurement baseline Reqs. Management Plan Scope Baseline Scope Management Plan	Data Analysis (<u>Trend Analysis, Variance Analysis</u>).
Project Files Integ.E2 (Know) Scope.P2 (Collect) Scope.P2 (Collect)	Project Documents Lessons Learned Register Requirements Documentation Reqs. Traceability Matrix	
Integ.E	W.P Data	
Company Files	OPA	
Output	To	
W.P Information	Integ.MC1	
Change Requests	Integ.MC2 (PICC)	
Project Plan Updates	Cost baseline, Performance measurement baseline, Schedule Baseline, Scope Baseline, Scope Management Plan	
Project Doc Updates	Lessons Learned Register, Requirements Documentation, Requirements Traceability Matrix	

Project Schedule Management

T.P1 - Plan Schedule Management (PMBOK 6.1)

From	Inputs	T & T
Integ.I	Project Charter	Data Analysis (<u>Alternative Analysis</u>), Expert Judgment, Meetings.
Project Files Integ.P Scope.P1	Project Management Plan Development Approach Scope Management Plan	
Company Files	EEF & OPA	
Output	To	
Schedule Management Plan	Integ.P, T.P2, T.P3, T.P4, T.P5, T.MC, Cost.P1, Risk.P2	

T.P2 - Define Activities (PMBOK 6.2)

From	Inputs	T & T
Project Files T.P1 Scope.P4 (Create)	Project Management Plan Schedule Management Plan Scope Baseline	Expert Judgment, Decomposition, Meetings, Rolling Wave Planning.
Company Files	EEF & OPA	
Output	To	
Activity List	T.P3, T.P4, T.P5, Rc.P2	
Activity Attributes	T.P3, T.P4, T.P5, Rc.P2	
Milestone List	Integ.E1, Integ.MC1, Integ.Close, T.P3, T.P4, T.P5, Risk.P4, Proc.P, Proc.MC	
Change Requests	Integ.MC.2 (PICC)	
Project Plan Updates	Cost baseline , Schedule baseline	

T.P3 - Sequence Activities (PMBOK 6.3)

From	Inputs	T & T
Project Files T.P1 Scope.P4 (Create)	Project Management Plan Schedule Management Plan Scope Baseline	Dependency Determination, Leads and Lags, Precedence Diagraming Method (PDM), Project MIS.
Project Files Integ.I T.P2 (Define) T.P2 (Define) T.P2 (Define)	Project Documents Assumption Log Activity Attributes Activity List Milestone List	
Company Files	EEF & OPA	
Output	To	
Project schedule Network Diagrams	T.P.5 (Schedule)	
Project Doc Updates	Activity List, Activity Attributes, Milestone List, Assumption Log	

T.P4 - Estimate Activity Duration (PMBOK 6.4)

From	Inputs	T & T
Project Files T.P1 Scope.P4 (Create)	Project Management Plan Schedule Management Plan Scope Baseline	Data Analysis (<u>Alternative analysis, Reserve Analysis</u>),
Project Files T.P2 (Define) T.P2 (Define) Integ.E2 (Know) T.P2 (Define) Rc.E1 (Acquire) Rc.P2 (Estimate) Rc.E1 (Acquire) Rc.P2 (Estimate) Risk.P2 (Identify)	Project Documents Assumption Log Activity Attributes Activity List Lessons Learned Register Milestone List Project Team Assignments Resource Breakdown Structure Resource Calendars Resource Requirements. Risk Register	Decision Making (<u>Voting</u>), Estimation Techniques (<u>Analogous Estimating, Bottom-up Estimating, Parametric Estimating, Three-point Estimating</u>),
Company Files	EEF & OPA	Expert judgment, Meetings.
Output	To	
Duration Estimates	T.P5, Risk.P2, Risk.P4	
Basis of Estimates	Integ.MC1, Integ.MC2, Integ.Close, T.P5, Cost.P3, Risk.P4	
Project Doc Updates	Activity Attributes, Assumption Log, Lessons Learned Register	

T.P5 - Develop Schedule (PMBOK 6.5)

From	Inputs	T & T
Project Files T.P1 Scope.P4 (Create)	Project Management Plan Schedule Management Plan Scope Baseline	Data Analysis (<u>Simulation</u> , <u>What if Scenario</u> <u>Analysis</u>),
Project Files T.P2 (Define) T.P2 (Define) Integ.I T.P4, Cost.P2, Rc.P2 T.P4 (Estimate) Integ.E2 (Know) T.P2 (Define) T.P3 (Sequence) Rc.E1 (Acquire) Rc.E1 (Acquire) Rc.P2 (Estimate) Risk.P2 (Identify)	Project Documents Activity List Activity Attributes Assumption Log Basis of Estimates Duration Estimates Lessons Learned Register Milestone List Project schedule Network D. Project Team Assignments Resource Calendars Resource Requirements. Risk Register	Agile Release Planning. Critical Chain Method, Critical Path Method, Leads and Lag, Resource Optimizing, Schedule Compression, Schedule Network Analysis, Project MIS,
Company Files	EEF & OPA	
Output	To	
Schedule Baseline	Integ.P, Integ.MC2, T.MC, Risk.P2, Risk.P4, Proc.MC	
Project schedule	Integ.E1, T.MC, Cost.P2, Cost.P3, Rc.P1, Rc.E1, Rc.E2, Rc.MC, Risk.P5, Proc.E, Stkh.P	
Schedule Data	T.MC	
Project Calendars	T.MC	
Change Requests	Integ.MC.2 (PICC)	
Project Plan Updates	Cost Baseline , Schedule Management Plan	
Project Doc Updates	Activity Attributes, Assumption Log, Duration Estimates, Lessons Learned Register, Resource Requirements, Risk Register	

T.MC - Control Schedule (PMBOK 6.6)

From	Inputs	T & T
Project Files Integ.P T.P5 (Develop) T.P1 Scope.P4 (Create)	Project Management Plan Performance measurement baseline Schedule Baseline Schedule Management Plan Scope Baseline	Data Analysis (<u>Earned Value Analysis, Iteration Burndown Chart, Performance Reviews, Trend Analysis, Variance Analysis, What-if Scenario Analysis</u>), Critical Path Method, Leads and Lag, Modeling Techniques, Project MIS, Resource Optimizing, Schedule Compression.
Project Files Integ.E2 (Know) T.P5 (Develop) T.P5 (Develop) Rc.E1 (Acquire) T.P5 (Develop)	Project Documents Lessons Learned Register Project Calendars Project Schedule Resource Calendars Schedule Data	
Integ.E	W.P. Data	
Company Files	OPA	
Output	To	
W.P Information	Integ.MC1	
Schedule Forecasts	Integ.MC1, Risk.P4	
Change Requests	Integ.MC2 (PICC)	
Project Plan Updates	Cost Baseline, Performance Measurement Baseline, Schedule Baseline, Schedule Management Plan	
Project Doc Updates	Assumption Log, Basis of Estimates, Lessons Learned Register, Project schedule, Resource Calendars, Risk Register, Schedule Data	

Project Cost Management

Cost.P1 - Plan Cost Management (PMBOK 7.1)

From	Inputs	T & T
Integ.I	Project Charter	Data Analysis (Alternative Analysis), Expert Judgment, Meetings.
Project Files Risk.P1 T.P1	Project Management Plan Risk Management Plan Schedule Management Plan	
Company Files	EEF & OPA	
Output	To	
Cost Management Plan	Integ.P, Cost.P2, Cost.P3, Cost.MC, Risk.P2	

Cost.P2 - Estimate Costs (PMBOK 7.2)

From	Inputs	T & T
Project Files Cost.P1 Q.P Scope.P4 (Create)	Project Management Plan Cost Management Plan Quality Management Plan Scope Baseline	Data Analysis (<u>Alternative Analysis, Reserve Analysis, Cost of Quality</u>),
Project Files Integ.E2 (Know) T.P5 (Develop) Rc.P2 (Estimate) Risk.P2 (Identify)	Project Documents Lessons Learned Register Project schedule Resource Requirements. Risk Register	Decision making (<u>voting</u>), Estimation Techniques (<u>Analogous estimating, Bottom-up estimating, Parametric estimating, Three-point estimating</u>),
Company Files	EEF & OPA	Expert Judgment, Project MIS.
Output	To	
Cost Estimates	Cost.P3, Rc.P2, Risk.P2, Risk.P4	
Basis of estimates	Integ.MC1, Integ.MC2, Integ.Close, T.P5, Cost.P3, Risk.P4	
Project Doc Updates	Assumption Log, Lessons Learned Register, Risk Register	

Cost.P3 - Determine Budget (PMBOK 7.3)

From	Inputs	T & T
Project Files Cost.P1 Rc.P1 Scope.P4 (Create)	Project Management Plan Cost Management Plan Resource Management Plan Scope Baseline	Data Analysis (<u>reserve analysis</u>), Cost Aggregation, Expert Judgment, Historical Information Reviews, Financing, Funding Limit Reconciliation.
Project Files T.P4, Cost.P2, Rc.P2 Cost.P2 (Estimate) T.P5 (Develop) Risk.P2 (Identify)	Project Documents Basis of estimates Cost Estimates Project schedule Risk Register	
Sponsor/Customer	Business Documents Business Case Benefits Management Plan	
Sponsor, Customer, Proc.E (Conduct)	Agreements	
Company Files	EEF & OPA	
Output		To
Cost Baseline	Integ.P, Integ.MC2, Cost.MC, Rc.E1, Risk.P2, Risk.P4, Risk.P5, Proc.E	
Project Funding Reqs.	Cost.MC	
Project Doc Updates	Cost Estimates, Project schedule, Risk Register	

Cost.MC - Control Costs (PMBOK 7.4)

From	Inputs	T & T
Project Files Cost.P1 Cost.P3 (Determine) Integ.P	Project Management Plan Cost Management Plan Cost Baseline Performance measurement baseline	Data Analysis (<u>Earned Value Management, Reserve Analysis, Trend Analysis, Variance Analysis</u>), Expert judgment, Forecasting techniques, Project MIS, TCPI.
Project Files Integ.E2 (Know)	Project Documents Lessons Learned Register	
Cost.P.3 (Budget)	Project Funding Requirements.	
Integ.E	W.P Data	
Company Files	OPA	
Output		To
W.P Information	Integ.MC1	
Cost Forecast	Integ.MC1	
Change Requests	Integ.MC2 (PICC)	
Project Plan Updates	Cost Baseline, Cost Management Plan, Performance measurement baseline	
Project Doc Updates	Assumption Log, Basis of estimates, Cost Estimates, Lessons Learned Register, Risk Register	

Project Quality Management

Q.P - Plan Quality Management (PMBOK 8.1)

From	Inputs	T & T
Project Files Scope.P1 Risk.P1 Scope.P4 (Create) Stkh.P	Project Management Plan Reqs. Management Plan Risk Management Plan Scope Baseline Stakeholder Engagement Plan	Data Gathering (<u>Benchmarking, Brainstorming, Interviews</u>),
Project Files Integ.I Scope.P2 (Collect) Scope.P2 (Collect) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Assumption Log Requirements Documentation Reqs. Traceability Matrix Risk Register Stakeholder Register	Data Representation (<u>Flow Charts, Logical Data Model, Matrix Diagram</u>), Data Analysis (<u>Cost-Benefit Analysis, Cost of Quality</u>),
Company Files	EEF & OPA	Decision making (<u>Multicriteria decision making</u>), Expert judgment, Meetings, Test and Inspection Planning.
Output	To	
Quality Manage. Plan	Integ.P, Scope.P1, Cost.P2, Q.E, Q.MC, Rc.P1, Risk.P2, Proc.P	
Quality Metrics	Q.E (Manage), Q.MC	
Project Plan Updates	Risk Management Plan, Scope Baseline	
Project Doc Updates	Lessons Learned Register, Requirements Traceability Matrix, Risk Register, Stakeholder Register	

Q.E – Manage Quality (PMBOK 8.2)

From	Inputs	T & T
Project Files Q.P	Project Management Plan Quality Management Plan	Data Gathering (<u>Checklists</u>),
Project Files Integ.E2 (Know) Q.MC Q.P Risk.P2 (Identify)	Project Documents Lessons Learned Register Quality Control Measurements Quality Metrics. Risk Report	Data Representation (<u>Affinity Diagrams, Cause and Effect Diagrams, Flow Charts, Histograms, Matrix Diagram, Scatter Diagrams</u>),
Company Files	OPA	Data Analysis (<u>Alternative Analysis, Document analysis, Process Analysis, Root Cause Analysis</u>), Decision making (<u>Multicriteria decision making</u>), Audits, Design For X, Problem Solving, Quality Improvement Methods.
Output	To	
Quality Reports	Integ.MC1, Integ.Close, Scope.MC1, Comm.E, Proc.MC	
Test and Evaluation Docs.	Q.MC	
Change Requests	Integ.MC.2 (PICC)	
Project Plan Updates	Cost Baseline, Quality Management Plan, Schedule Baseline, Scope Baseline	
Project Doc Updates	Issue Log, Lessons Learned Register, Risk Register	

Q.MC - Control Quality (PMBOK 8.3)

From	Inputs	T & T
Project Files Q.P	Project Management Plan Quality Management Plan	Data Gathering (<u>Checklists, Check Sheets, Statistical Sampling, Questionnaire and Surveys</u>),
Project Files Integ.E2 (Know) Q.P Q.E (Manage)	Project Documents Lessons Learned Register Quality Metrics. Test and Evaluation Documents	
Integ.MC.2 (PICC)	Approved Change Requests	
Integ.E	Deliverables	Data Representation (<u>Cause and Effect Diagrams, Control Charts, Histograms, Scatter Diagrams</u>),
Integ.E	W.P Data	
Company Files	EEF & OPA	Data Analysis (<u>Performance Reviews, Root Cause Analysis</u>), Inspection, Meetings, Testing/Product Evaluation.
Output	To	
Quality Control Measurements	Integ.Close, Q.E (Manage)	
Verified Deliverables	Scope.MC1 (Validate)	
W.P Information	Integ.MC1	
Change Requests	Integ.MC2	
Project Plan Updates	Quality Management Plan	
Project Doc Updates	Issue Log, Lessons Learned Register, Risk Register, Test and Evaluation Documents	

Project Resource Management

Rc.P1 - Plan Resource Management (PMBOK 9.1)

From	Inputs	T & T
Integ.I	Project Charter	Data Representation (<u>Hierarchical Charts</u> , <u>Responsibility Assignment Matrix</u> , <u>Text-Oriented Formats</u>), Expert judgment, Meetings, Organizational Theory.
Project Files Q.P Scope.P4 (Create)	Project Management Plan Quality Management Plan Scope Baseline	
Project Files T.P5 (Develop) Scope.P2 (Collect) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Project Schedule Requirements Documentation Risk Register Stakeholder Register	
Company Files	EEF & OPA	
Output		To
Resource Management Plan	Cost.P3, Rc.P2, Rc.E1, Rc.E2, Rc.E3, Rc.MC, Comm.P, Comm.E, Comm.MC, Risk.P2, Risk.P5, Proc.P, Stkh.P, Stkh.MC	
Team Charter	Rc.E2, Rc.E3	
Project Doc Updates	Assumption Log, Risk Register	

Rc.P2 – Estimate Activity Recourses (PMBOK 9.2)

From	Inputs	T & T
Project Files Rc.P1 Scope.P4 (Create)	Project Management Plan Resource Management Plan Scope Baseline	Data Analysis (<u>Alternative Analysis</u>), Estimation Techniques (<u>Analogous Estimating</u> , <u>Bottom-up Estimating</u> , <u>Parametric Estimating</u>), Expert judgment, Meetings, Project MIS.
Project Files T.P2 (Define) T.P2 (Define) Integ.I Cost.P2 (Estimate) Rc.E1 (Acquire) Risk.P2 (Identify)	Project Documents Activity Attributes Activity List Assumption Log Cost Estimates Resource Calendars Risk Register	
Company Files	EEF & OPA	
Output		
Resource Requirements.	T.P4, T.P5, Cost.P2, Rc.E1, Rc.MC, Risk.P2, Risk.P4, Proc.P	
Basis of Estimates	Integ.MC1, Integ.MC2, Integ.Close, T.P5, Cost.P3, Risk.P4	
Resource Breakdown Structure	Integ.E2 (Know), T.P4, Rc.MC	
Project Doc Updates	Activity Attributes, Assumption Log, Lessons Learned Register	

Rc.E1 - Acquire Recourses (PMBOK 9.3)

From	Inputs	T & T
Project Files Cost.P3 (Determine) Proc.P Rc.P1	Project Management Plan Cost Baseline Proc. Management Plan Resource Management Plan	Decision Making (<u>Multicriteria Decision Making</u>),
Project Files T.P5 (Develop) Rc.E1 (Acquire) Rc.P2 (Estimate) Stkh.I (Identify)	Project Documents Project Schedule Resource Calendars Resource Requirements. Stakeholder Register	Interpersonal and Team Skills (<u>Negotiation</u>), Pre-Assignment, Virtual team.
Company Files	EEF & OPA	
Output	To	
Physical Resource Assignments	Rc.MC	
Project Team Assignments	Integ.E2 (Know), T.P4, T.P5, Rc.E2, Rc.E3, Risk.P5, Proc.P	
Resource Calendars	T.P4, T.P5, T.MC, Rc.P2, Rc.E1, Rc.E2, Risk.P5	
Change Requests	Integ.MC.2 (PICC)	
Project Plan Updates	Cost Baseline, Resource Management Plan	
Project Doc Updates	Lessons Learned Register, Project Schedule, Resource Breakdown Structure, Resource Requirements, Risk Register	
EEF & OPA Update	Company Files.	

Rc.E2 - Develop Team (PMBOK 9.4)

From	Inputs	T & T
Project Files Rc.P1	Project Management Plan Resource Management Plan	Interpersonal and Team Skills (<u>Conflict Management, Influencing, Motivation, Negotiation, Team Building</u>), Colocation, Communication Technology, Individual and Team Assignments, Meetings, Recognition and Rewards, Training, Virtual Teams.
Project Files Integ.E2 (Know) T.P5 (Develop) Rc.E1 (Acquire) Rc.E1 (Acquire) Rc.P1 (Plan)	Project Documents Lessons Learned Register Project Schedule Project Team Assignments Resource Calendars Team Charter	
	EEF & OPA	
Output		To
Team Performance Assessments	Rc.E3	
Project Plan Updates	Resource Management Plan	
Project Doc Updates	Lessons Learned Register, Project Schedule, Project Team Assignments, Resource Calendars, Team Charter	
EEF and OPA Updates	Company Files.	

Rc.E3 - Manage Team (PMBOK 9.5)

From	Inputs	T & T
Project Files Rc.P1	Project Management Plan Resource Management Plan	Interpersonal and Team Skills (<u>Conflict Management, Decision Making, Emotional Intelligence, Influencing, Leadership</u>), Project MIS.
Project Files Integ.E1 (Work) Integ.E2 (Know) Rc.P1 (Plan) Rc.E2 (Develop)	Project Documents Issue Log Lessons Learned Register Team Charter Team Performance Assessments	
Integ.MC1	W.P Report	
Company Files	EEF & OPA	
Output		To
Change Requests	Integ.MC.2 (PICC)	
Project Plan Updates	Cost Baseline, Resource Management Plan, Schedule Baseline	
Project Doc Updates	Issue Log, Lessons Learned Register, Project Team Assignments	
EEF Updates	Company Files.	

Rc.MC - Control Resources (PMBOK 9.6)

From	Inputs	T & T
Project Files Rc.P1	Project Management Plan Resource Management Plan	Data Analysis (<u>Alternative Analysis, Cost-Benefit Analysis, Performance Reviews, Trend Analysis</u>), Interpersonal and Team Skills (<u>Negotiation, Influencing</u>), Problem Solving, Project MIS.
Project Files Integ.E1 (Work) Integ.E2 (Know) Rc.E1 (Acquire) T.P5 (Develop) Rc.P2 (Estimate) Rc.P2 (Estimate) Risk.P2 (Identify)	Project Documents Issue Log Lessons Learned Register Physical Resource Assignments Project Schedule Resource Breakdown Structure Resource Requirements Risk Register	
Integ.E	W.P Data	
Sponsor/Customer Proc.E (Conduct)	Agreements	
Company Files	OPA	
Output	To	
W.P Information	Integ.MC1	
Change Requests	Integ.MC2	
Project Plan Updates	Cost Baseline, Resource Management Plan, Schedule Baseline	
Project Doc Updates	Assumption Log, Issue Log, Lessons Learned Register, Physical Resource Assignments, Resource Breakdown Structure, Risk Register	

Project Communications Management

Comm.P - Plan Communication Management (PMBOK 10.1)

From	Inputs	T & T
Integ.I	Project Charter	
Project Files Rc.P1 Stkh.P	Project Management Plan Resource Management Plan Stakeholder Engagement Plan	Data Representation (<u>Stakeholder Engagement Assignment Matrix</u>),
Project Files Scope.P2 (Collect) Stkh.I (Identify)	Project Documents Requirements Documentation Stakeholder Register	Interpersonal and Team Skills (<u>Communication Styles Assessments, Political Awareness, Cultural Awareness</u>),
Company Files	EEF & OPA	Expert Judgment, Communication Requirement Analysis, Communication Technology, Communication Models, Communication Methods, Meetings.
Output	To	
Communication Management Plan	Integ.P, Comm.E, Comm.MC, Proc.E, Stkh.I, Stkh.P, Stkh.E, Stkh.MC	
Project Plan Updates	Stakeholder Engagement Plan	
Project Doc Updates	Project Schedule, Stakeholder Register	

Comm.E - Manage Communications (PMBOK 10.2)

From	Inputs	T & T
Project Files Comm.P Rc.P1 Stkh.P	Project Management Plan Comm. Management Plan Resource Management Plan Stakeholder Engagement Plan	Communication Skills (<u>Communication Competence, Feedback, Nonverbal, Presentations</u>),
Project Files Stkh.E (Manage) Integ.E1 (Work) Integ.E2 (Know) Q.E (Manage) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Change Log Issue Log Lessons Learned Register Quality Reports Risk Report Stakeholder Register	Interpersonal and Team Skills (<u>Active Listening, Conflict Management, Cultural Awareness, Meeting Management, Networking, Political Awareness</u>),
Integ.MC1	W.P Report	
Company Files	EEF & OPA	Communication Technology, Communication Methods, Meetings, Project MIS, Project Reporting.
Output	To	
Project Communications	Integ.E1, Integ.Close, Comm.MC, Stkh.MC	
Project Plan Updates	Communication Management Plan, Stakeholder Engagement Plan	
Project Doc Updates	Issue Log, Lessons Learned Register, Project Schedule, Risk Register, Stakeholder Register	
OPA Updates	Company Files.	

Project Risk Management

Risk.P1 - Plan Risk Management (PMBOK 11.1)

From	Inputs	T & T
Integ.I	Project Charter	Data Analysis (<u>Stakeholder Analysis</u>), Expert judgment, Meetings.
Project Files	Project Management Plan All Plans	
Project Files Stkh.I (Identify)	Project Documents Stakeholder Register	
Company Files	EEF & OPA	
Output		To
Risk Management Plan	Integ.P, Cost.P1, Q.P, Risk.P2, Risk.P3, Risk.P4, Risk.P5, Risk.E, Risk.MC, Proc.E, Proc.MC, Stkh.P, Stkh.E	

Risk.P2 - Identify Risks (PMBOK 11.2)

From	Inputs	T & T
Project Files Cost.P3 (Determine) Cost.P1 Q.P Scope.P1 Rc.P1 Risk.P1 T.P5 (Develop) T.P1 Scope.P4 (Create)	Project Management Plan Cost Baseline Cost Management Plan Quality Management Plan Reqs. Management Plan Resource Management Plan Risk Management Plan Schedule Baseline Schedule Management Plan Scope Baseline	Data Gathering (<u>Brainstorming, Checklists, Interviews</u>), Data Analysis (<u>Root Cause Analysis, Assumption and Constraint Analysis, SWOT Analysis, Document Analysis</u>),
Project Files Integ.I Cost.P2 (Estimate) T.P4 (Estimate) Integ.E1 (Work) Integ.E2 (Know) Scope.P2 (Collect) Rc.P2 (Estimate) Stkh.I (Identify)	Project Documents Assumption Log Cost Estimates Duration Estimates Issue Log Lessons Learned Register Requirements Documentation Resource Requirements Stakeholder Register	Interpersonal and Team Skills (<u>Facilitating</u>), Expert Judgment, Meetings, Prompt Lists.
Sponsor/Customer Proc.E (Conduct)	Agreements	
Proc.P	Procurement Documents	
Company Files	EEF & OPA	
Output		To
Risk Register	Integ.E1, Integ.Close, Integ.MC1, Scope.P3, T.P4, T.P5, Cost.P2, Cost.P3, Q.P, Rc.P1, Rc.P2, Rc.MC, Risk.P3, Risk.P4, Risk.P5, Risk.E, Risk.MC, Proc.P, Proc.E, Proc.MC, Stkh.P, Stkh.MC	
Risk Report	Integ.E1, Integ.MC1, Integ.MC2, Integ.Close, Q.E, Comm.E, Risk.P4, Risk.P5, Risk.E, Risk.MC	
Project Doc Updates	Assumption Log, Issue Log, Lessons Learned Register	

Risk.P3 - Perform Qualitative Risk Analysis (PMBOK 11.3)

From	Inputs	T & T
Project Files Risk.P1	Project Management Plan Risk Management Plan	Data Gathering (<u>Interviews</u>),
Project Files Integ.I Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Assumption Log Risk Register Stakeholder Register	Data Representation (<u>Probability and Impact Matrix, Hierarchical Charts</u>),
Company Files	EEF & OPA	Data Analysis (<u>Risk Data Quality Assessment, Risk Probability and Impact Assessment, Assessment of Other Risk Parameters</u>), Interpersonal and Team Skills (<u>Facilitating</u>), Expert Judgment, Meetings, Risk Categorization.
Output	To	
Project Doc Updates	Assumption Log, Issue Log, Risk Register, Risk Report	

Risk.P4 - Perform Quantitative Risk Analysis (PMBOK 11.4)

From	Inputs	T & T
Project Files Cost.P3 (Determine) Risk.P1 T.P5 (Develop) Scope.P4 (Create)	Project Management Plan Cost Baseline Risk Management Plan Schedule Baseline Scope Baseline	Data Gathering (<u>Interviews</u>), Data Analysis (<u>Simulation, Sensitivity Analysis, Decision Tree Analysis, Influence Diagrams</u>),
Project Files Integ.I T.P4, Cost.P2, Rc.P2 Cost.P2 (Estimate) Cost.P2 (Estimate) T.P4 (Estimate) T.P2 (Define) Rc.P2 (Estimate) Risk.P2 (Identify) Risk.P2 (Identify) T.MC	Project Documents Assumption Log Basis of Estimates Cost Estimates Cost Forecasts Duration Estimates Milestone List Resource Requirements Risk Register Risk Report Schedule Forecasts	Interpersonal and Team Skills (<u>Facilitating</u>), Expert Judgment, Representation of Uncertainty.
Company Files	EEF & OPA	
Output	To	
Project Doc Updates	Risk Report	

Risk.P5 - Plan Risk Responses (PMBOK 11.5)

From	Inputs	T & T
Project Files Cost.P3 (Determine) Rc.P1 Risk.P1	Project Management Plan Cost Baseline Resource Management Plan Risk Management Plan	Data Gathering (<u>Interviews</u>), Data Analysis (<u>Alternative Analysis, Cost-Benefit Analysis</u>), Decision making (<u>Multicriteria decision making</u>), Interpersonal and Team Skills (<u>Facilitating</u>), Expert Judgment, Risk Strategies (<u>Strategies For Threats, Strategies For Opportunities, Contingent Response Strategies, Strategies for Overall Project Risk</u>).
Project Files Integ.E2 (Know) T.P5 (Develop) Rc.E1 (Acquire) Rc.E1 (Acquire) Risk.P2 (Identify) Risk.P2 (Identify)	Project Documents Lessons Learned Register Project Schedule Project Team Assignments Resource Calendars Risk Register Risk Report	
Company Files	EEF & OPA	
Output	To	
Change Requests	Integ.MC.2 (PICC)	
Project Plan Updates	Cost Baseline, Cost Management Plan, Procurement Management Plan, Quality Management Plan, Resource Management Plan, Schedule Baseline, Schedule Management Plan, Scope Baseline	
Project Doc Updates	Assumption Log, Cost Forecasts, Lessons Learned Register, Project Schedule, Project Team Assignments, Risk Register, Risk Report	

Risk.E- Implement Risk Responses (PMBOK 11.6)

From	Inputs	T & T
Project Files Risk.P1	Project Management Plan Risk Management Plan	Interpersonal and Team Skills (<u>Influencing</u>), Expert Judgment, Project MIS.
Project Files Integ.E2 (Know) Risk.P2 (Identify) Risk.P2 (Identify)	Project Documents Lessons Learned Register Risk Register Risk Report	
Company Files	EEF & OPA	
Output	To	
Change Requests		
Project Doc Updates	Issue Log, Lessons Learned Register, Project Team Assignments, Risk Register, Risk Report	

Risk.MC - Monitor Risks (PMBOK 11.7)

From	Inputs	T & T
Project Files Risk.P1	Project Management Plan Risk Management Plan	Data Analysis (<u>Technical Performance Analysis</u> , <u>Reserve Analysis</u>), Audits, Meetings.
Project Files Integ.E1 (Work) Integ.E2 (Know) Risk.P2 (Identify) Risk.P2 (Identify)	Project Documents Issue Log Lessons Learned Register Risk Register Risk Report	
Integ.E	W.P Data	
Integ.MC1	W.P Report	
Output	To	
W.P Information	Integ.MC1	
Change Requests	Integ.MC2 (PICC)	
Project Plan Updates	Any Components	
Project Doc Updates	Assumption Log, Issue Log, Lessons Learned Register, Risk Register, Risk Report	
OPA Updates	Company File	

Project Procurement Management

Proc.P - Plan Procurement Management (PMBOK 12.1)

From	Inputs	T & T
Integ.I	Project Charter	
Project Files Q.P Rc.P1 Scope.P4 (Create) Scope.P1	Project Management Plan Quality Management Plan Resource Management Plan Scope Baseline Scope Management Plan	Data Gathering (<u>Market Research</u>), Data Analysis (<u>Make-or-Buy Analysis</u>),
Project Files T.P2 (Define) Rc.E1 (Acquire) Scope.P2 (Collect) Scope.P2 (Collect) Rc.P2 (Estimate) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Milestone List Project Team Assignments Requirements Documentation Reqs. Traceability Matrix Resource Requirements Risk Register Stakeholder Register	Expert judgment, Meetings, Source Selection Analysis.
Sponsor/Customer	Business Documents Business Case Benefits Management Plan	
Company File	EEF & OPA	
Output	To	
Proc. Management Plan	Integ.P, Rc.E1, Proc.E, Proc.MC	
Procurement Documents Procurement Strategy Bid Documents Proc. Statement of Work Source selection criteria Make-or-buy decisions Independent Cost Estimates	Integ.Close, Risk.P2, Proc.E, Proc.MC	
Change requests	Integ.MC.2 (PICC)	
Project Doc Updates	Lessons Learned Register, Milestone List, Requirements Documentation, Requirements Traceability Matrix, Risk Register, Stakeholder Register	
OPA Update	Company Files.	

Proc.E - Conduct Procurement (PMBOK 12.2)

From	Inputs	T & T
Project Files Comm.P Integ.P Cost.P3 (Determine) Proc.P Scope.P1 Risk.P1 Scope.P1	Project Management Plan Comm. Management Plan Config. Management Plan Cost Baseline Procurement Management Plan Reqs. Management Plan Risk Management Plan Scope Management Plan	Data Analysis (<u>Proposal Evaluation</u>), Interpersonal and Team Skills (<u>Negotiation</u>), Advertising, Bidder conferences, Expert judgment.
Project Files Integ.E2 (Know) T.P5 (Develop) Scope.P2 (Collect) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Lessons Learned Register Project Schedule Requirements Documentation Risk Register Stakeholder Register	
Proc.P	Procurement Documents	
Sellers	Seller proposals	
Company File	EEF & OPA	
Output	To	
Selected sellers	Project Files	
Agreements	Integ.I, Integ.MC1, Integ.Close, Scope.P2, Cost.P3, Rc.MC, Risk.P2, Proc.MC, Stkh.I, Stkh.P	
Change requests	Integ.MC.2 (PICC)	
Project Plan Updates	Cost Baseline, Communication Management Plan, Procurement Management Plan, Quality Management Plan, Requirements Management Plan, Risk Management Plan, Schedule Baseline, Scope Baseline	
Project Doc Updates	Lessons Learned Register, Requirements Documentation, Requirements Traceability Matrix, Resource Calendars, Risk Register, Stakeholder Register	

Proc.MC - Control Procurements (PMBOK 12.3)

From	Inputs	T & T
Project Files Integ.P Proc.P Scope.P1 Risk.P1 T.P5 (Develop)	Project Management Plan Change Management Plan Procurement Management Plan Reqs. Management Plan Risk Management Plan Schedule Baseline	Data Analysis (<u>Performance Reviews</u> , <u>Earned Value Analysis</u> , <u>Trend Analysis</u>), Audits, Claims Administration, Expert Judgment, Inspections.
Project Files Integ.I Integ.E2 (Know) T.P2 (Define) Q.E (Manage) Scope.P2 (Collect) Scope.P2 (Collect) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Assumption Log Lessons Learned Register Milestone List Quality Reports Requirements Documentation Reqs. Traceability Matrix Risk Register Stakeholder Register	
Proc.E	Agreements	
Proc.P	Procurement Documents	
Integ.MC.2 (PICC)	Approved change requests	
Integ.E	W.P data	
Company Files	EEF & OPA	
Output		To
Closed Procurements		Proc.MC
W.P information		Integ.MC.1
Change requests		Integ.MC.2 (PICC)
Project Plan Updates		Risk Management Plan, Procurement Management Plan, Schedule Baseline, Cost Baseline
Project Doc Updates		Lessons Learned Register, Resource Requirements, Requirements Traceability Matrix, Risk Register, Stakeholder Register
OPA Update		Company Files

Project Stakeholders Management

Stkh.I - Identify Stakeholders (PMBOK 13.1)

From	Inputs	T & T
Integ.I	Project charter	Data Gathering (<u>Questionnaire and Surveys, Brainstorming</u>),
Project Files Comm.P Stkh.P	Project Management Plan Comm. Management Plan Stakeholder Engagement Plan	
Project Files Stkh.E (Manage) Integ.E1 (Work) Scope.P2 (Collect)	Project Documents Change Log Issue Log Requirements Documentation	Data Representation (<u>Stakeholder Mapping</u>),
Sponsor/Customer	Business Documents Business Case Benefits Management Plan	Data Analysis (<u>Stakeholder Analysis, Document Analysis</u>),
Sponsor/Customer Proc.E (Conduct)	Agreements	Expert judgment, Meetings.
Company Files	EEF & OPA	
Output	To	
Stakeholder register	Integ.E2 (Know), Scope.P2, Q.P, Rc.P1, Rc.E1, Comm.P, Comm.E, Risk.P1, Risk.P2, Risk.P3, Proc.P, Proc.E, Proc.MC, Stkh.P, Stkh.E, Stkh.MC	
Change Requests	Integ.MC.2 (PICC)	
Project Plan Updates	Requirements Management Plan, Communication Management Plan, Risk Management Plan, Stakeholder Engagement Plan	
Project Doc Updates	Assumption Log, Issue Log, Risk Register	

Stkh.P - Plan Stakeholders Management (PMBOK 13.2)

From	Inputs	T & T
Project Files Comm.P Rc.P1 Risk.P1	Project Management Plan Comm. Management Plan Resource Management Plan Risk Management Plan	Data Gathering (Benchmarking), Data Representation (<u>Mind Mapping, Stakeholder Engagement Assignment Matrix</u>),
Project Files Integ.I Stkh.E (Manage) Integ.E1 (Work) T.P5 (Develop) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Assumption Log Change Log Issue Log Project Schedule Risk Register Stakeholder Register	Data Analysis (<u>Assumption and Constraint Analysis, Root Cause Analysis</u>),
Sponsor/Customer Proc.E (Conduct)	Agreements	Decision making (<u>Prioritization/Ranking</u>),
Company Files	EEF & OPA	Expert judgment, Meetings.
Output	To	
Stakeholder Engagement Plan	Integ.P, Scope.P2, Q.P, Comm.P, Comm.E, Comm.MC, Stkh.I, Stkh.E, Stkh.MC	

Stkh.E - Manage Stakeholders Engagement (PMBOK 13.3)

From	Inputs	T & T
Project Files Integ.P Comm.P Risk.P1 Stkh.P	Project Management Plan Change Management Plan Comm. Management Plan Risk Management Plan Stakeholder Engagement Plan	Communication Skills (<u>Feedback</u>), Interpersonal and Team Skills (<u>Conflict Management, Cultural Awareness, Negotiation, Observation/Conversation, Political Awareness</u>),
Project Files Stkh.E (Manage) Integ.E1 (Work) Integ.E2 (Know) Stkh.I (Identify)	Project Documents Change Log Issue Log Lessons Learned Register Stakeholder Register	Expert judgment, Ground Rules, Meetings.
Company Files	EEF & OPA	
Output	To	
Change requests	Integ.MC.2 (PICC)	
Project Plan Updates	Communication Management Plan, Stakeholder Engagement Plan	
Project Doc Updates	Change Log, Issue Log, Lessons Learned Register, Stakeholder Register	

Stkh.MC - Control Stakeholders Engagement (PMBOK 13.4)

From	Inputs	T & T
Project Files Comm.P Rc.P1 Stkh.P	Project Management Plan Comm. Management Plan Resource Management Plan Stakeholder Engagement Plan	Data Representation (<u>Stakeholder Engagement Assignment Matrix</u>),
Project Files Integ.E1 (Work) Integ.E2 (Know) Comm.E (Manage) Risk.P2 (Identify) Stkh.I (Identify)	Project Documents Issue Log Lessons Learned Register Project Communications Risk Register Stakeholder Register	Data Analysis (<u>Alternative Analysis, Root Cause Analysis, Stakeholder Analysis</u>),
Integ.E	W.P data	Decision making (<u>Multicriteria decision making, Voting</u>),
Company Files	EEF & OPA	Communication Skills (<u>Feedback, Presentations</u>), Interpersonal and Team Skills (<u>Active Listening, Cultural Awareness, Leadership, Networking, Political Awareness</u>), Meetings.
Output	To	
W.P information	Integ.MC1	
Change requests	Integ.MC2 (PICC)	
Project Plan Updates	Communication Management Plan, Resource Management Plan, Stakeholder Engagement Plan	
Project Doc Updates	Issue Log, Lessons Learned Register, Risk Register, Stakeholder Register	

الباب السابع – قائمة المصطلحات في الـ PMP

وضعنا هنا مجموعة من المصطلحات المتعلقة بالـ PMP الإصدار السادس، ومن المفيد التنبيه إلى التالي:

- ليست جميع المصطلحات موجودة هنا، وإنما وضعنا جزءا جيدا منها. وعلى القارئ النظر في كتاب الـ PMBok 6th ed وإضافة المصطلحات الأخرى التي يراها مهمة إلى هذه القائمة.
- أبقينا على بعض المصطلحات الموجودة في الإصدار الخامس (وذلك لأهميتها حسب وجهة نظرنا)، وإذا وجد القارئ أن هذه المصطلحات غير مهمة فله أن يحذفها من القائمة.
- الهدف من وضع هذه القائمة (قائمة المصطلحات) هو مساعدة القارئ في مراجعة مفاهيم الـ PMP وخصوصا قبل الامتحان. وطريقة المراجعة تكون بالنظر إلى هذه المصطلحات والتأكد من فهمها، والتأكد من القدرة على تعريفها، والتأكد من القدرة على تمييز الفرق بينها وبين المصطلحات الشبيهة لها. وقد شرحنا ذلك بتفصيل في الفصل الأول والثالث من الكتاب (كيفية دراسة الـ PMP 5th ed).

Chapter 1:

Standard, generally recognized, good practice, guide, methodology, regulation, practice, project, progressively elaborated, result, project management, tools, techniques, process groups, grouped processes, knowledge area, constraints, assumptions, program, portfolio, OPM (organizational project management), portfolio review board, foundation standards, practice standards, PMI extensions, PMO (project management office), operation management, project-based organization (PBO), business value, interpersonal skills, business skills, technical skills, people skills.

Project drive-change, project initiation context, Project management vs operation management,

Product life cycle (example: concept, delivery, growth, maturity, retirement),
Product development life cycle (PDLC, example: idea, research, develop, test, analyze, introduce).

Project life-cycle (series of phases that a project passes from start to completion), generic example: (start, prepare, work, end). Project life-cycle can be predictive or adaptive.

Development Life-cycle (DLC) is not PDLC, but it is the phases of the project that are associated with the creating/developing the product. So DLC is part of the project life-cycle. The DLC types are: Predictive {plan driven}, iterative, incremental, adaptive {agile}, or hybrid.

Development Approach: the type of DLC that will be used in the project, see PMBok page 704.

Project management life-cycle = project management process groups (initiation, planning, executing, monitoring & control, closing).

Project phases (sequential, overlapping, iterative), project phase vs phase gate, project management processes (Input, Tools & Techniques, Output {ITTO}), product-oriented processes, project management process groups (initiation, planning, executing, monitoring & control, closing), Knowledge areas (integration, scope, schedule, cost, quality resource, communication, risk, procurement, stakeholder), {Work Performance Data vs Information vs Report}.

Business documents (business case, benefits management plan),
Business case (business need, business objectives, feasibility study, etc.).
Benefits management plan (target benefits, strategic alignment, timeframe, assumptions, risk, etc.).

Accountable vs responsible vs authority (page 29,42), project charter, assumption vs constrains, rolling wave planning, Guide vs Methodology.

project success measures, Present value (PV), net present value (NPV), internal rate of return(IIR), benefit cost ratio (BCR), return on investment (ROI), payback period, lifecycle cost, opportunity cost, sunk cost, discount rate.

Chapter 2:

The Project Environment,

Enterprise environmental factors (EEF), Internal EEF ({Organizational culture, structure and governance}, graphical distribution of facilities, infrastructure, Information technology, employee capability, etc.), External EEF (Market place conditions, Social and cultural influences, legal restrictions, commercial database, academic research, industry standards, etc.).

Organizational process assets (OPA) {processes, policies, procedures, corporate knowledge base, lessons learned repository, etc.},
organizational system, system, management elements (division of work, authority & responsibility, discipline of action, unity of command, unity of direction, general goals vs individual goals, fair payments), project governance, governance framework (rules, policies, procedures, norms, relationships, systems, processes), Organizational structures, functional, weak matrix, Project expediter (coordinator), balance matrix, strong matrix, projectized, virtual, hybrid, Project Management Office (PMO) {supportive, controlling, directive}.

project stakeholders, project team, sponsor, sponsor organization, customers, users, organizational group, functional manager, line manager, staff.

Chapter 3:

Project Manager Role,

Project Manager sphere of influence, project manager competences, PMI talent triangle (technical, leadership, strategic & business), politics and power, leadership vs management, leadership styles, performing integration, complexity {system behavior, human behavior, ambiguity),

Chapter 4:

Project integration management,

Develop Project charter, develop project management plan, Direct and manage work, manage knowledge, monitor and control, perform integrated change control, close phase/project.

The need for integration: resource allocation, competing demands, alternative approaches, process tailoring, managing interdependencies

project charter, business case, assumption log, plans vs baselines, baseline {**approved version of a plan/model**}, project documents, changes actions (corrective, preventive, defect repair, updates).

Additional Plans (page 88) (Change management plan {how change requests will be formally authorized and incorporated}, configuration management plan {how items of the project will be recorded and updated so the project remains consistent and operative}, performance measurement baseline {scope-schedule-cost performance measures which will be applied for monitoring the project work performance and progress}, project life-cycle {describe the series of phases of the project from initiation to closure}, development approach {define whether predictive, iterative, agile or hybrid development approach will be adopted}, management reviews {identify the times of management meeting reviews}.

Explicit vs tacit, misconception of knowledge management (page 100), monitoring {collecting & assessing measurements and trends to effect process improvements}, control {determining corrective or preventive actions or replacing and following up on action plans to determine whether the actions taken resolved the performance issue}, Monitor and control processes concerned with {comparing actual performance against plans, assessing performance periodically to determine if corrective or preventive actions are needed, providing appropriate reporting, etc},

Perform integrated change control, configuration control tools (identify, record & report, verify & audit), change control tools (identify, document, decide {approve, defer, reject}, Track), validation, verification, impact of change, change control board (CCB), configuration management system, approval level of authority, change control system, “as is” state, “to be” state, work authorization system, change log, approved change

requests, change control tools, impact (scope, time, cost, quality, risk, customer satisfaction).

Close project or phase, administrative closure, lesson learned, archive project records, phase gate, stage gate, kill point, milestone.

Chapter 5:

Project scope management,

Plan scope management, collect requirements, define scope, create wbs, validate scope, control scope.

Scope Management Plan {Set of processes that will answer how the scope statement, WBS, scope baseline will be created,, how all of that will be approved and maintained,, and how acceptance will be obtained} ,

Requirements Management Plan {How requirements activities will be planned, tracked and reported,, how changes will be initiated, analyzed, traced, tracked and reported,, How requirements will be prioritized,, etc} .

Gold plating, formal or informal, detailed or broadly framed, product scope vs project scope, product backlog, backlog list, validation vs verification, features, functions, attributes, specifications, requirements, impact of change (time, cost, risk, quality, customer satisfaction), Requirements Documentation {Business, stakeholder, solution (functional and non-functional), transition, project and quality requirements} , Product analysis, value analysis, value engineering, alternative analysis.

Project vs Product requirements (page 140), Project Scope Statement {Scope description, deliverables, acceptance criteria, exclusions} ,

Create WBS, breakdown project deliverables, decomposition, planning package, work package, control account, code of accounts, WBS dictionary, scope baseline {Scope statement, WBS, work package, planning package, WBS dictionary} , Control scope, scope creep, variance, variance analysis, Validation vs verification, verified deliverables, validate scope, inspection, accepted deliverables.

Chapter 6:

Project Schedule Management

Plan Schedule Management, Define Activities, Sequence Activities, Estimate Activity Durations, Develop Schedule, Control Schedule.

Iterative Scheduling, On-demand scheduling, Rolling Wave Planning, Activity list, activity attributes, milestone list,

Schedule Management Plan {How the schedule will be developed, monitored, and controlled. The plan may establish the schedule model development, release and iteration length, Level of accuracy, level of precision, units of measure, procedure links, model maintenance, control thresholds, rules for performance measurements, reporting formats} ,

Define Activities, Activity list, Activity Identifier, Activity attributes, Activity Code (keywords), effort, discrete effort, apportioned effort, level of effort (LEO), milestones, milestone list.

Sequence Activities, activity on node (AoN), activity on arrow (AoA), precedence diagramming method (PDM), predecessor activity, successor activity, precedence relationship (dependency, logical relationship), FS, SS, SF, FF, lag (waiting time), lead (minus lag), internal/external dependency, Mandatory dependencies (hard logic), discretionary dependencies (soft logic), schedule network template, subnetwork templates (fragments), project schedule network diagram (dependencies diagram).

Estimate Activity Resources, Padding, resource calendar, alternative analysis, bottom-up estimating, activity resource requirements, resource breakdown structure.

Estimate activity duration, calendar units, work units, workdays, analogous estimation, parametric estimation, learning curve, three-point estimate, Pert, triangular distribution, beta distribution, deviation, standard deviation (sigma), variance, reserve, reserve analysis, contingency reserve (buffer), management reserve, activity duration estimate.

Develop schedule, schedule model, schedule network analysis, network path, critical path, critical path activities (longest with zero float activities), near-critical path activities, path divergence, path convergence, ES,EF,LS,LF, network logic, critical path method, total float (for an activity), free float, project float, forward pass, backward pass, critical chain method, resource optimization techniques (resource leveling, resource smoothing), modelling techniques (what-if scenarios, simulation, monte-carlo analysis), schedule compression (crashing, fast tracking), scheduling tool, schedule baseline (approved version of schedule model), project schedule, master schedule, milestone schedule, tabular schedule, bar chart, network diagrams, hammock (summary activities), gantt chart, schedule data, project calendar.

Control schedule, retrospective reviews, progress reporting, performance reviews, variance, variance analysis, variation, cause and degree of variance, adjusting lag and lead, work performance information, data date, schedule forecast.

Chapter 7:

Project cost management

Plan Cost Management, Estimates Costs, Determine Budget, Control Cost.

Cost management plan {how the project costs will be estimated, managed, monitored, and controlled. The plan may include the following components: Level of accuracy, level of precision, units of measure, procedure links, model maintenance, control thresholds, rules of performance measurements, reporting formats}.

Rules of performance method (fixed formula method, weighted milestone method).

Estimate cost, law of diminishing returns (if 1 lead to 1 then 3 may not lead to 3), rough order of magnitude, degree of confidence, degree of accuracy, bottom-up estimating, analogous estimating, parametric estimating, three point estimate, triangular distribution, beta distribution, reserve analysis, contingency and management reserve, straight line depreciation, accelerated depreciation, activity cost estimates, variable cost, fixed cost, indirect cost, direct cost, basis of estimates.

Determine budget, cost baseline (approved version of time-phased project budget excluding management reserves), funding limits reconciliation, imposed date, project funding requirements, projected cash flow, projected expenditure.

Work package cost estimates = activity cost estimates + activity contingency reserves.
Control accounts = work package cost estimates + contingency reserve
Cost baseline = Control accounts
Project budget = Cost baseline + management reserve

Control cost, earned value management, cost forecast,

PV: Planned value, budgeted costs for work schedule, BCWS
AC: actual cost, actual cost for work performed, ACWP
EV: earned value, budgeted cost for work performed, BCWP

CV: cost variance = $EV - AC$
SV: schedule variance = $EV - PV$

CPI: cost performance index = EV/AC
SPI: schedule performance index = EV/PV

BAC: budget at completion, the budget
EAC: estimate at completion:

- If performance is the same then:
 $EAC = AC + (BAC - EV)/CPI = BAC/CPI$
- If performance will be as planned first time then:
 $EAC = AC + (BAC - EV)$
- If plan is no longer valid then $EAC = AC + \text{New ETC}$

If both CPI and SPI taken into account then:
 $EAC = AC + (BAC - EV) / (CPI * SPI)$

ETC: estimate to complete = $EAC - AC$
VAC: variance at completion = $BAC - EAC$

Remaining Work = $BAC - EV$
Remaining Funds = $BAC - AC$

If plan is no longer valid then:
Remaining Funds = $EAC - AC$

TCPI: To complete performance index = $(BAC - EV) / (BAC - AC)$

If plan is no longer valid then: $TCPI = (BAC - EV) / (EAC - AC)$

{If no information is available, then:

$PV = (Time\ Passed / Total\ Time) * BAC,$

$EV = (Work\ Done / Total\ Work) * BAC,$

AC: Cost spent on the project so far,

Work Done/Total Work = % of completed work}

Examples: a project has been authorized for 12 months and 1000\$ as a budget. After 6 months the actual cost spent was \$600, and 30% of the work planed has been done.

Then

$AC = 600$

$PV = (6/12) * 1000 = 500$

$EV = 0.3 * 1000 = 300$

If $CV = 0$ or $CPI = 1$ then Project is on budget.

If $CV > 0$ Or $CPI > 1$ then The Project is under budget, else the project is over budget.

If $SV = 0$ or $SPI = 1$ then Project is on schedule.

If $SV > 0$ Or $SPI > 1$ then The Project is ahead of schedule, else the project is behind schedule.

Chapter 8:

Project Quality Management,

Plan Quality Management, Manage Quality, Control Quality.

Quality Management Plan {How applicable policies, procedures, and guidelines will be implemented to achieve quality objectives. The plan may include the following: q. standards, q. objectives, q. roles and responsibilities, q. tools, major procedures, etc}.

Emerging practice in project management (customer satisfaction, continual improvement, management responsibility, mutual beneficial partnership with suppliers).

Quality policy, quality vs grade, precision vs accuracy, cost of quality {prevention costs, appraisal costs, failure costs}, compliance, quality requirement, gold plating, cost-benefit analysis, prevention cost, appraisal cost, conformance work (inspection and prevention work), rework, seven basic quality tools: {cause and effect diagram (fishbone, Ishikawa, 5 whys, 5 how's), flowchart (process map), check sheets (tally sheets), Histogram, Pareto diagram (20/80), scatter diagram, control chart}, Normal distribution,

-+1 sigma ~ 70%

-+2 sigma ~ 95%

-+3 sigma ~ 99.7%

-+4 sigma ~ 99.999%

Control chart, trend chart, upper/lower specification limits, upper/lower control limits, tolerance, rule of seven, assignable cause, benchmarking, design of experiments,

statistical sampling, force field analysis, quality management plan, quality management system, process management plan, quality metrics, quality checklist.

Manage quality {Translating the quality plan into executable quality activities that incorporate the quality policies into the project}, quality control measurements, Process decision program chart (PDPC process map), interrelationship digraphs, tree diagrams (decomposition parent/child), prioritization matrices (criteria weighting), matrix diagrams (show simple relation between rows and columns), Activity network diagrams (AoN, AoA). Quality Audit, Process Analysis, root-cause analysis.

Manage Quality sometimes called the quality assurance.

Control quality (monitor, record, analyze, validate), prevention vs inspection, attribute sampling, variable sampling, inspection (reviews, peer reviews, audits, walkthroughs), Approved change request review (the output is “validate changes”), quality control measures, validated changes, verified deliverables.

Inspection can be called: reviews, peer reviews, audits, walkthrough.

Chapter 9:

Project Resource Management

Plan Resource Management, Estimate Activity Resources, Acquire Resources, Develop Team, Manage Team, Control Resources.

Resource Management Plan {how the resources should be categorized, allocated, managed and released. The plan may include the following: Identification of resources, acquiring resources guidelines, roles and responsibilities, project organization charts, team management guidelines, training strategies, team development methods, resource control methods, recognition plan}.

In relation to human resources (organize, manage, lead):

who should do what, project team, project management team (core, executive, leadership), ethical behavior, organizational chart (hierarchical) responsibility chart (matrix), role (job) description, organizational breakdown structure (OBS), organizational units (departments), responsibility, role, responsibility assignment matrix (RAM), RACI Matrix (Responsible, Accountable, Consult, Inform), Text-Oriented formats {Role-responsibility-authority Form, position/Job descriptions}, authority, responsibility, competences, qualification, organizational theory, organizational politics, HR plan, staffing management plan, resource histogram.

Acquire Project Team, Halo Effect (generalization based on specific factor), pre-assignment, Acquisition, negotiation, virtual team, Multi-criteria decision analysis, project staff assignment, project team directory, resource calendar.

Develop Project Team, competences, staff turnover rate, trust, interpersonal skills (soft skills), emotional intelligence, on-the-job training, team work (forming storming norming performing adjourning), team building activities, ground roles (code-of-conduct related to the project), co-location, War room (all approval in one place on the same time), recognition and rewards, win-lose (zero sum)

rewards, attitudinal survey, specific assessment, structured interview, ability tests, Management Styles (task oriented, result oriented, people oriented).

Manage Project Team (tracking and managing), leader vs boss, Maslow's Theory, Herzberg's Theory (Hygiene and motivators), Vroom theory (Expectancy Theory), McClelland's theory (achievement, affiliation, power), McGregor Theory (Theory X,Y), fringe benefits, perquisites (perk), observation and conversation, project management appraisals, conflict management (withdraw/avoid, smooth/accommodate, compromise/reconcile, force/direct, collaborate/problem solve), conflict intensity (schedules and priorities), the 5 powers for PM (Legitimate, Reward, Penalty, Expert, Referent).

Bottom-up estimating, analogues estimating, parametric estimating, resource requirements, basis of analysis, resource breakdown structure, selection criteria {availability, cost, ability, experience, knowledge, skills, attitude, international factors}, pre-assignment, virtual teams, resource calendars, team performance assessments, emotional intelligence, team charter.

Chapter 10:

Project Communication Management (who should know what when and how).

Plan Communication Management, Manage Communication, Monitor Communications.

Communication mechanisms {written forms, spoken, formal, informal, gestures, media (pictures, actions, etc), choice of words}, Communication activities {internal, external, formal, informal, hierarchical focus, official, unofficial, written, oral}.

Communication requirement analysis, communication management plan, information needs (type, format, value), communication channels ($n(n-1)/2$), communication technology (shared portal, video conferencing, audio conferencing, emails, chatting, etc), communication models {encode, decode, medium, noise, acknowledgment, feedback/response}, communication methods {interactive, push, pull}, escalation, communication constrains, communication style assessment,

Communication management plan {how project communications will be planned, structured, implemented, monitored for effectiveness},

Manage Communication (collecting and disseminating), information management system, performance reporting (collect, variance analysis, forecast, distribute), Project reporting.

Chapter 11:

Project Risk Management,

Plan Risk Management, Identify Risks, Perform Qualitative Risk Analysis, Perform Quantitative Risk Analysis, Plan Risk Responses, Implement Risk Responses, Monitor Risks.

Risk (positive & negative), uncertain, Objective, individual risk, overall risk, non-event risks {variability risk, ambiguity risk}, project resilience, unknowable-unknowns, integrated risk management.

Threat, opportunity, Probability and impact, risk factor (probability, impact, frequency, timing), risk responses, risk tolerance, risk thresholds, risk appetite, risk utility function (utility/outcome vs cost), avert/averse, neutral, risk seeker, risk categories.

Develop Risk Plan, stakeholder risk attitude, strategic risk exposure, risk management responsibilities, risk management plan, risk categories, risk breakdown structure.

Identify Risk, sense of ownership and responsibilities, risk response action, risk register, influence diagram, assumption analysis (level of accuracy vs inaccuracy), SWOT, checklist analysis, Risk register (cause, event, impact): because of cause x then event y may happen therefore impact z can affect the project.

Risk register may include list of identified risks, risk owners, risk responses.

Perform qualitative risk analysis, qualitative (relative), major constraints (cost, time, scope, quality), rate risk, watch list, probability impact matrix, risk score, risk priority, Risk Data Quality Assessment, Risk categorization (eg: by root cause), Risk urgency assessment, Assumption log update,

Perform quantitative risk analysis, quantitative (calculated numerical rating), continuous probability distributions, discrete (individually separate and distinct) distribution, uniform distribution, sensitivity analysis (potential impact, tornado diagram), modelling and simulation, expected monetary values (scenarios, decision tree), Monte Carlo analysis,

Plan Risk responses, (escalate, avoid, transfer, mitigate, active accept, passive accept), (escalate, exploit, share, enhance, accept), contingent response strategies, triggers, residual risks, secondary risks, trigger conditions, contingency plans, fallback plans (plan B), workarounds, risk related contract decisions, risk response owner.

Monitor risk, Risk assessment (for the risks), risk audit (for the risk management processes).

Chapter 12:

Project Procurement Management,

Plan Procurement Management, Conduct Procurements, Control Procurements.

Buyer (receiver), seller (provider), centralized contracting environment, decentralized contracting, procure procedures, contract types: fixed, reimbursable (cost+), Time & material (measurable).

Fixed: FFP (Fixed Price Contracts), FPIF (Fixed Price with Incentive Fee), FP-EPA (fixed Price with Economical Price Adjustment).

Cost+: CPFF (Cost Plus Fixed Fee), CPIF (Cost Plus with Incentive Fee), CPAF (Cost Plus with Award Fee).

Make or Buy, Hire or Buy, procurement statement of work, performance (design and build requesting performance), functional (design and build requesting functions), design (build according to given design), procurement documents (RFI, RFQ, RFP, IFB), Independent cost estimates, source selection criteria.

Conduct procurement, obtaining, selecting, awarding, bidder conference, proposal evaluation techniques, independent estimates, advertising, procurement negotiation, past performance history, screening system, presentations, agreements (including contracts), memorandum of understanding, purchase order, non-competitive procurements, standard contract terms and conditions (provisions), special conditions (provisions), letter of intent, letter of award.

Control Procurements, contract change control system, procurement performance review, inspection and audit, performance reporting, payment statement, claim, contested changes, constructive changes, dispute, appeal, alternative dispute resolution, claims administration, Records management system, procurement documentation, correspondence, procurement audit, lesson learned, negotiation, negotiation settlements, litigation, structured review, contract non-compliance, closed procurements.

Chapter 13:

Project Stakeholder management,
Identify Stakeholders, Plan Stakeholder Engagement, Manage Stakeholder Engagement,
Monitor Stakeholder Engagement.

Identify Stakeholders, internal, external, performing, influencer, supportive, neutral, resistant, explicit/implicit requirements, procurement documents, stakeholder analysis, Power interest grid, Power influence grid, influence impact grid, stakeholder cube, salience model (power, urgency, legitimacy), direction of influence (upward, downward, outward, sideward), prioritization.

Current/Desire grid {Stakeholder Engagement Assignment Matrix} (“as is” to “to be” state). Manage stakeholder engagement, issue log, interpersonal skills, management skills, Control stakeholder’s engagement, status review.

Professional Responsibility:

Code of ethics and professional conduct (PMBOK page3) {www.pmi.org/codeofethics}.

Professional responsibility, aspirational vs mandatory, copy rights, report non-conformities, respect time, conflict of interest, disclose the conflict of interest, responsibility (take ownership), respect (show high regards), fairness (impartially and objectively), honesty (truthful manner).