



Project Management 1/2 Day Intro

Session Starts at 10am



What is a Project?

Project

“A temporary endeavour undertaken to create a unique product, service or result” –

PMBOK® Guide 5th Edition

- Temporary body of work
- Purpose to create a unique product, service or result
- Clear start and end point
- Defined set of objectives or deliverables
- Sequence of activities

Routine Work:
On-going
Repetitive
Process orientated



What is project Management?

Project management is the application of knowledge, skill, tools, and techniques to **project activities** to meet project requirements.

Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing.

Definition from PMBOK® Guide, 5th Edition

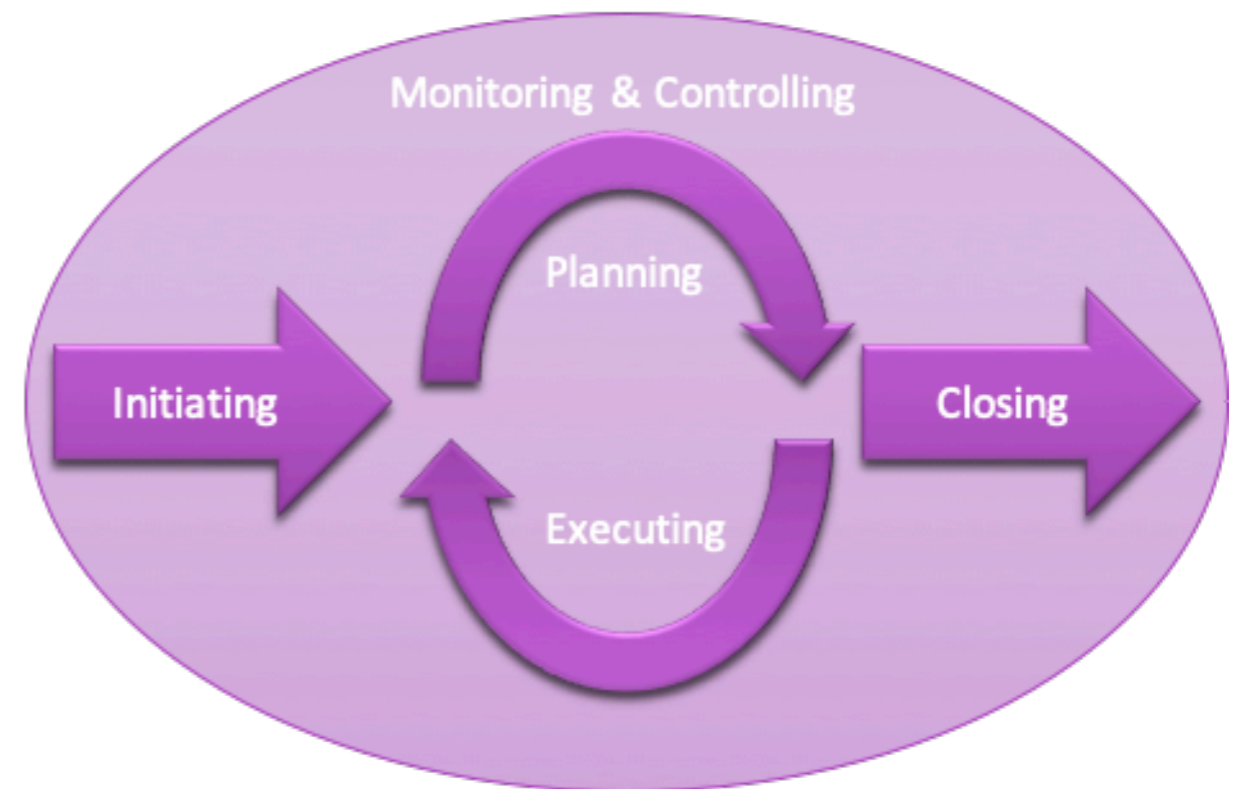
Scope



Cost

Time

1. Initiating Processes
2. Planning Processes
3. Executing Processes
4. Monitoring & Controlling Processes
5. Closing Processes

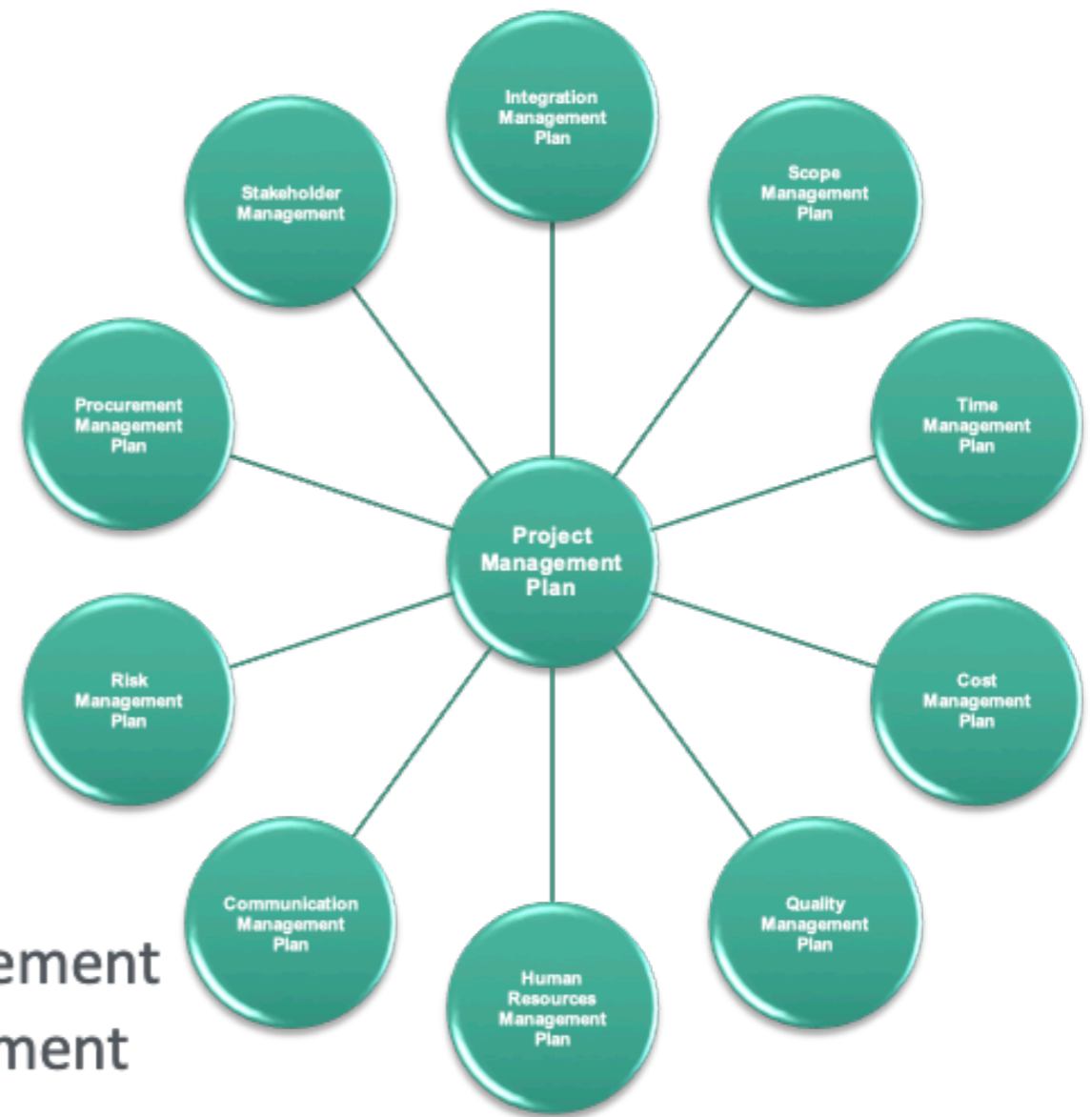


(Based on Figure 3-1. Project Management Process Groups – PMBOK® Guide)

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Knowledge Areas

1. Project Integration Management
2. Project Scope Management
3. Project Time Management
4. Project Cost Management
5. Project Quality Management
6. Project Human Resources Management
7. Project Communications Management
8. Project Risk Management
9. Project Procurement Management
10. Project Stakeholder Management



In addition there is a further topic known as Professional Responsibility



Business Case

- Interviews
- Focus Groups
- Facilitated Workshops
- Questionnaires & Surveys
- Observations
- Prototypes



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Business Case

Is the project in line with Company and Market, Other needs?

Yes

No

Do we have the capabilities?

Yes

Ideal

Mistake

No

Think more

Scrap

Elements of a Project Charter

- Project title and description purpose , justification
- Business case
- Project Objectives – Measurable SMART
- Stakeholders and Known Requirements – high level
- Product or service description & deliverables
- Project Risk – high level
- Summary of Milestones
- High level summary of costs as known
- Approval requirements
- Project Manager – responsibility and authority
- Pre-assigned resources
- Sponsor authorising project charter

Ref - Project Charter Document Template

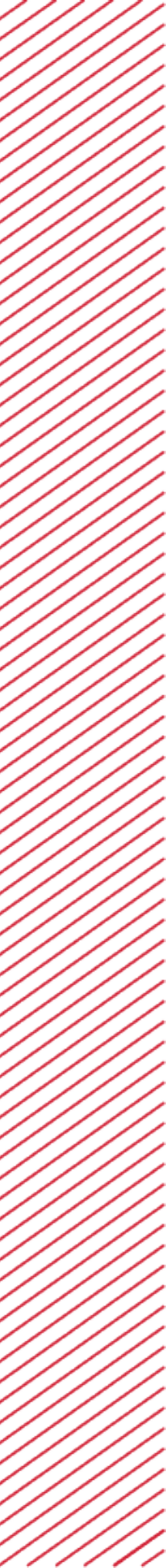


Scope Statement / Goal

The key stakeholders need to be constantly reminded of the agreed scope of the project and that any changes will only occur according to the agreed procedures. The **Scope Statement or Goal**, which was developed at the end of the Initiation Phase is very useful to help control scope creep.

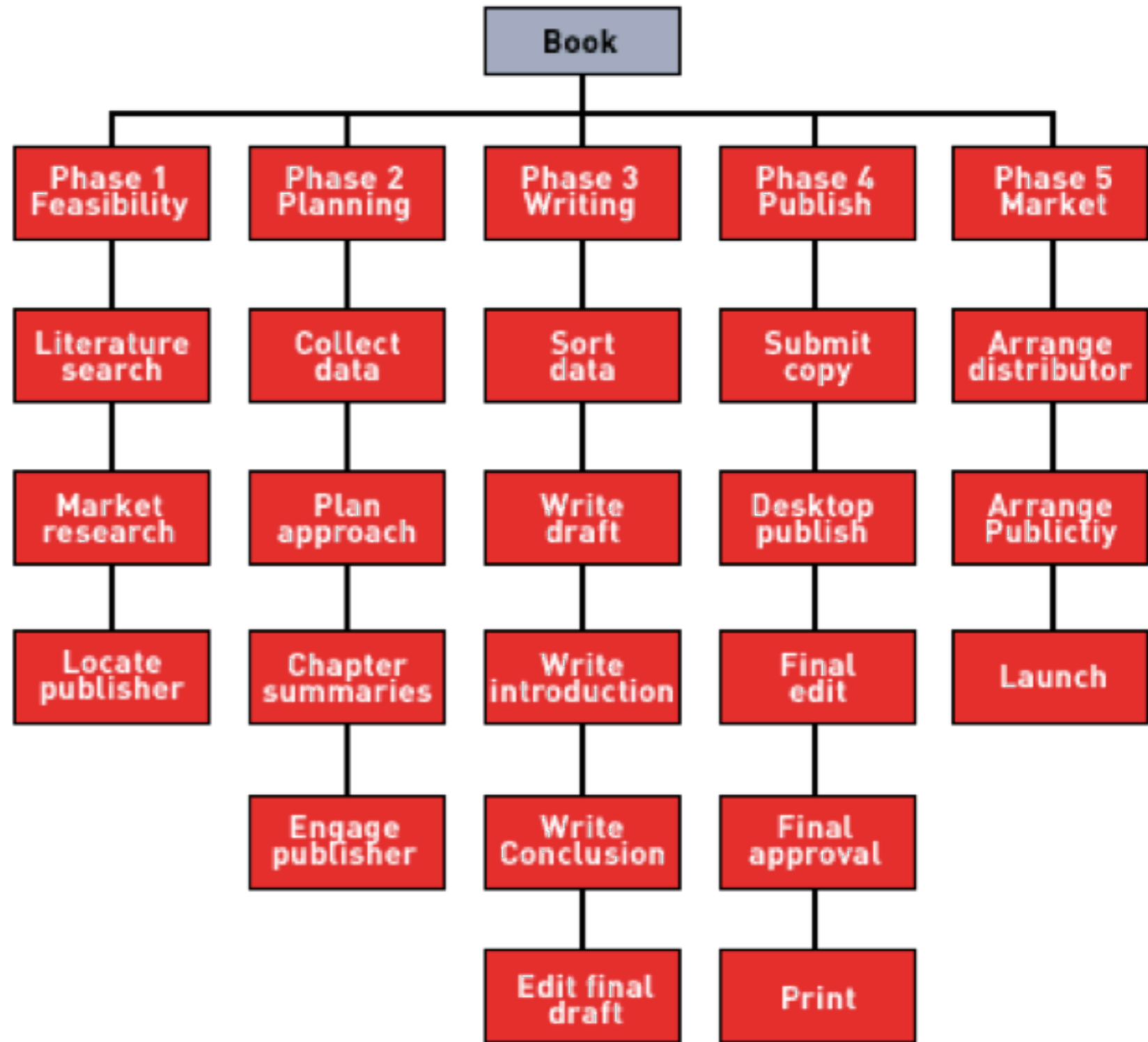
Scope Creep

This is unauthorised increase in scope or functionality. 'Scope creep' is a major cause of time and cost delays as well as reduction in quality. It can often be caused by over commitment as a result of casually taking on more work than initially agreed. A stakeholder will request something in addition or something different from what has already been planned and agreed. Changes to scope will have impacts on time, cost and quality and could also trigger other kinds of risks.



WBS

Work Breakdown Structure





Estimating Activity Durations: Tools & Techniques...

1. Expert Judgement

Guided by historical information and input from experts

2. Analogous Estimating Top Down

Guided by drawing analogies from previous similar projects

Estimating Activity Durations: Tools & Techniques...

3. Parametric Estimating

Guided by metrics based on historical data from previous projects

Example Block Laying

If resource assigned can lay 10 blocks/hr

Duration to lay 500 blocks = $500/10 = 50$ hrs

Estimating Activity Durations: Tools & Techniques...

4. Three- point estimates

PERT – Programme Evaluation and review Technique

T_m = Most likely duration –given resources, availability, productivity, interruptions, dependencies

T_o = Optimistic – best case

T_p = Pessimistic – worse case

T_e = Estimated time

$$T_e = \frac{(T_o + 4 T_m + T_p)}{6}$$

Example

$T_o = 3$ days $T_m = 5$ days $T_p = 8$ days

What is T_e ?

$$T_e = \frac{(3 + 4(5) + 8)}{6} = 5.2 \text{ days}$$

Estimating Activity Durations: Tools & Techniques...

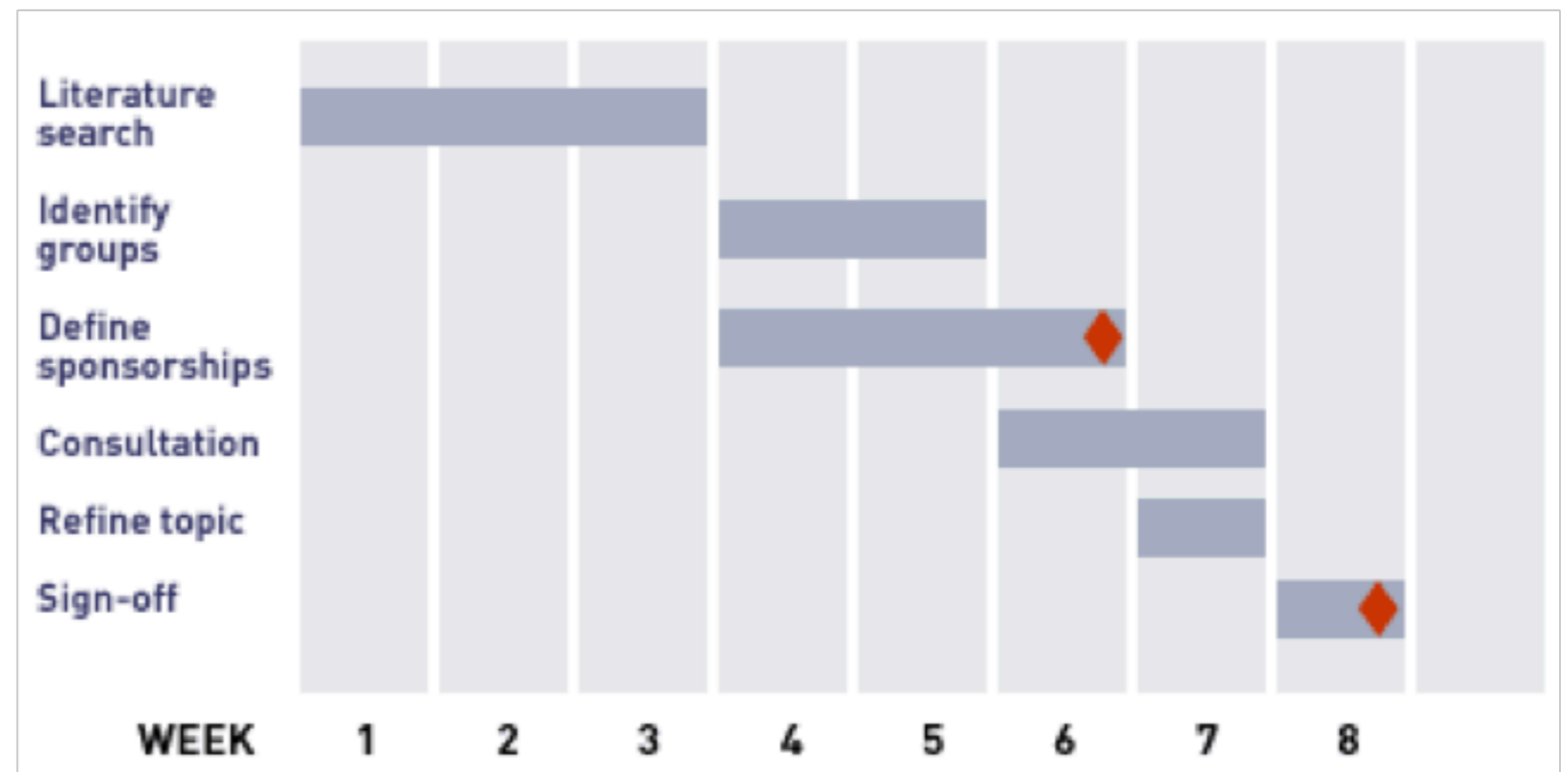
5. Reserve analysis

Include contingency to account for uncertainty
e.g. % of total estimate, fixed number of work
periods

*Important: Reserves are a required part of
project management and must always be
linked to the risk management plan*

Gantt Charts

The project schedule is commonly presented as a Gantt chart. It is an excellent communication tool, however, as the Gantt chart does not show dependencies very clearly it is less easily manipulated than the precedence network.





Risks & Quality Management

RISK

All projects are subject to uncertainty and therefore to risk. Risks should be identified and ranked in terms of impact, probability and responses developed for those risks incurring medium to high impact or probability

Qualitative Risk Ranking

1. What is the probability of the risk?

Apply number e.g. 1-10 or High, medium, low

2. What is the impact ?

Apply number e.g. 1-10 or high, medium, low

3. Explore each within risk category

e.g. cost, time, scope, quality as decided

4. Multiply probability by impact to give a score

Example	Risk 1	Risk 2
Probability of occurrence	5 (medium)	8 (high)
Severity of impact	9 (high)	2 (low)

Risk 1 Score $5 \times 9 = 45$

Risk 2 Score $8 \times 2 = 16$



Strategies to Manage Risk

avoidance - plan in such a way to avoid the risk altogether

mitigation - plan to reduce the risk

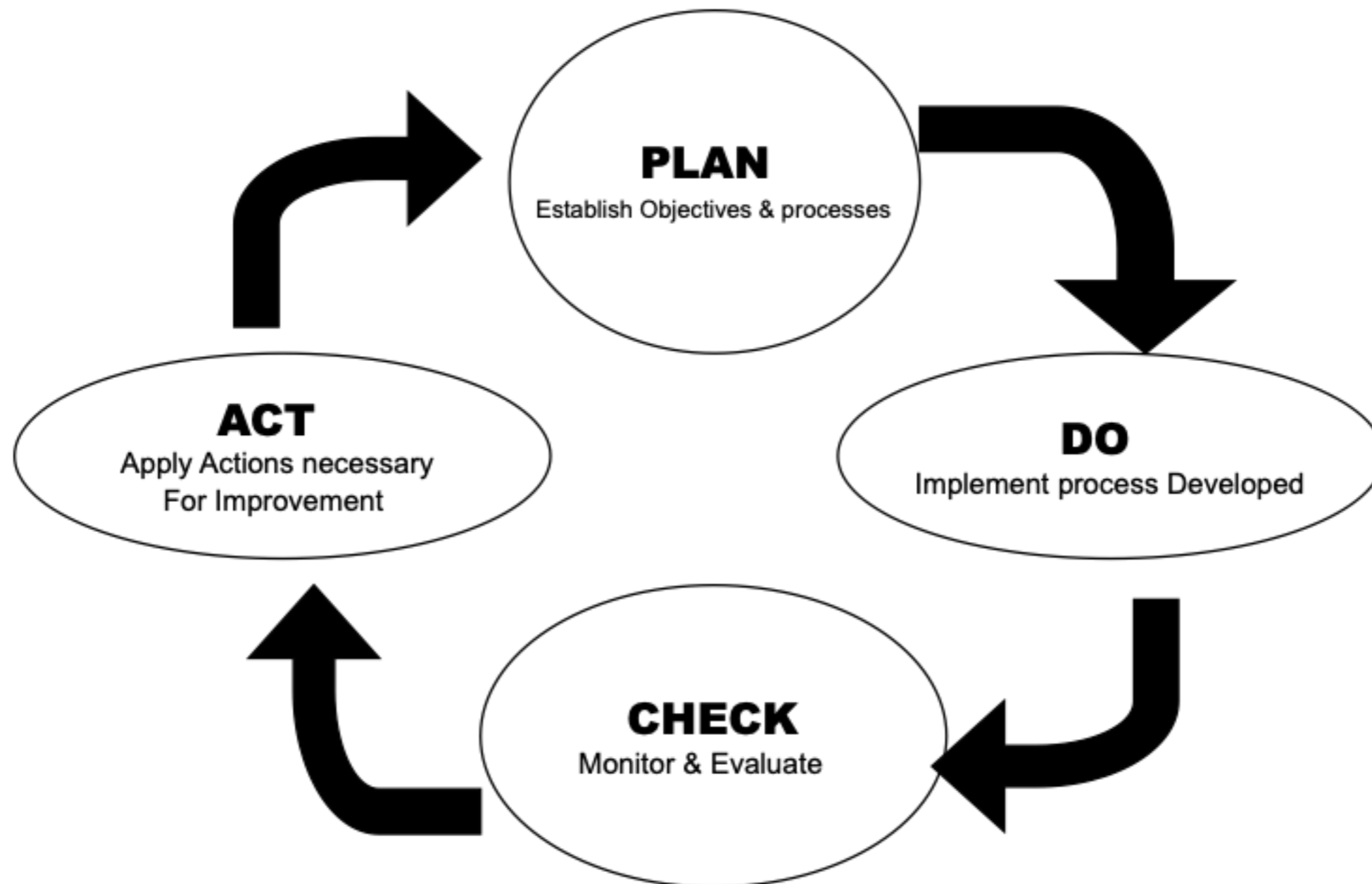
acceptance - simply accept the risk if there is no alternative or if it is very unlikely or of little potential impact

procurement - contract out the risk - however the contract still needs to be managed carefully

contingency planning - determine alternative strategies if the risk is triggered

insurance - transfer the risk through insurance (also a risky strategy)

PDCA



8 Quality Principles

Principle 1: Customer Focus

Principle 2: Leadership

Principle 3: Involvement of People

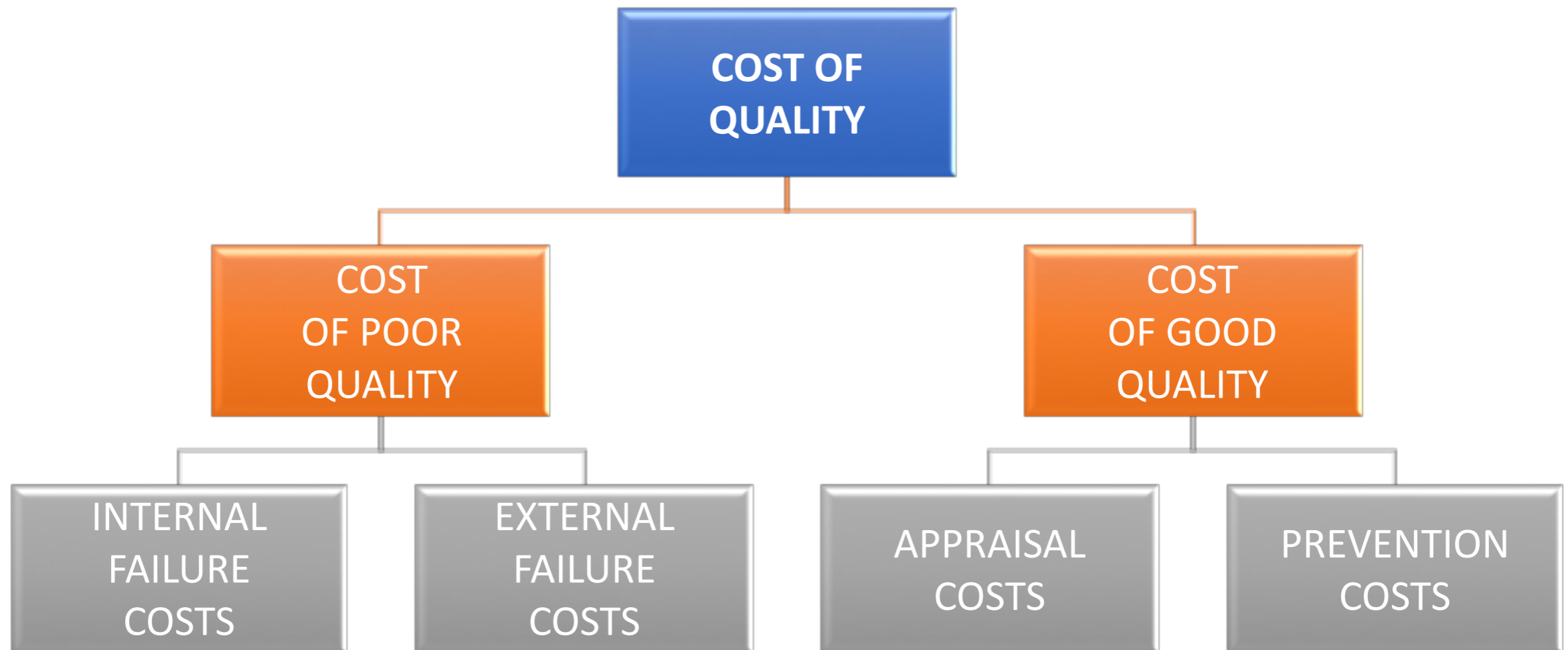
Principle 4: Process Approach

Principle 5: System Approach to management

Principle 6: Continual Improvement

Principle 7: Factual approach to decision making

Principle 8: Mutually beneficial supplier relationships



Cost of Poor Quality: Internal Failure Costs

Products or services do not conform to requirements or customer/user needs
Found before delivery to external customers
Would have otherwise led to the customer not being satisfied.
Caused both by errors in products and inefficiencies in processes.

Examples

- Rework
- Delays
- Re-designing
- Shortages
- Failure analysis
- Re-testing
- Downgrading
- Downtime
- Lack of flexibility and adaptability

DID NOT GET IT RIGHT FIRST TIME !!!!

Cost of Poor Quality: External Failure Costs

Products or services do not conform to requirements or customer/user needs

Found after delivery to external customers
Lead to customer dissatisfaction.

Examples

- Examples include the costs for:
- Complaints
- Repairing goods and redoing services
- Warranties
- Customers' bad will
- Losses due to sales reductions
- Environmental costs

DID NOT GET IT RIGHT FIRST TIME !!!!!

DID NOT DETECT BEFORE DELIVERY !!!!

Cost of Good Quality: Appraisal Costs

Costs to control products and services to ensure a high quality level in all stages, conformance to quality standards and performance requirements

Examples €

- Checking and testing purchased goods and services
- In-process and final inspection/test
- Field testing
- Product, process or service audits
- Calibration of measuring and test equipment

✓

DID WE GET IT RIGHT FIRST TIME????

Cost of Good Quality: Prevention Costs

Costs of all activities that are designed to prevent poor quality from arising in products or services.

Examples €

- Quality planning
- Supplier evaluation
- New product review
- Error proofing
- Capability evaluations
- Quality improvement team meetings
- Quality improvement projects
- Quality education and training

GET IT RIGHT FIRST TIME

Reports

1. Project Proposal

The Project Proposal is developed at the conclusion of the Project Initiation phase and requires "sign-off" or the authority to proceed to the next phase. It contains the summarised results of the initial high-level planning process. In large projects the Project Proposal may be substituted by a Business Case. Detailed planning follows approval of the Project Proposal.

Reports

2. Project Plan

The Project Plan is developed at the conclusion of the Planning phase of the project. It is a detailed document comprising:

Scope definition (items from the WBS listed with functionality under the headings of the key deliverables plus exclusions)

Schedule (including project milestones)

Budget

Risk schedule (major project risks and management strategy)

Project organisation structure (reporting and approval pathways)

Roles and responsibilities (project team and key stakeholders)

Quality system (procedure and standards)

Procurement schedule (human resources; goods and services)

Communications strategy (protocols, templates, reporting schedule)

Change management procedure

Reports

3. Variance Request

A Variance Request is a formal process that documents any changes to scope or any risks triggered which might result in variances to the project objectives, in terms of time, cost or quality.

Reports

4. Status Report

A Status report is required at regular intervals throughout the project. The frequency and the format should be negotiated with the Project Sponsor.

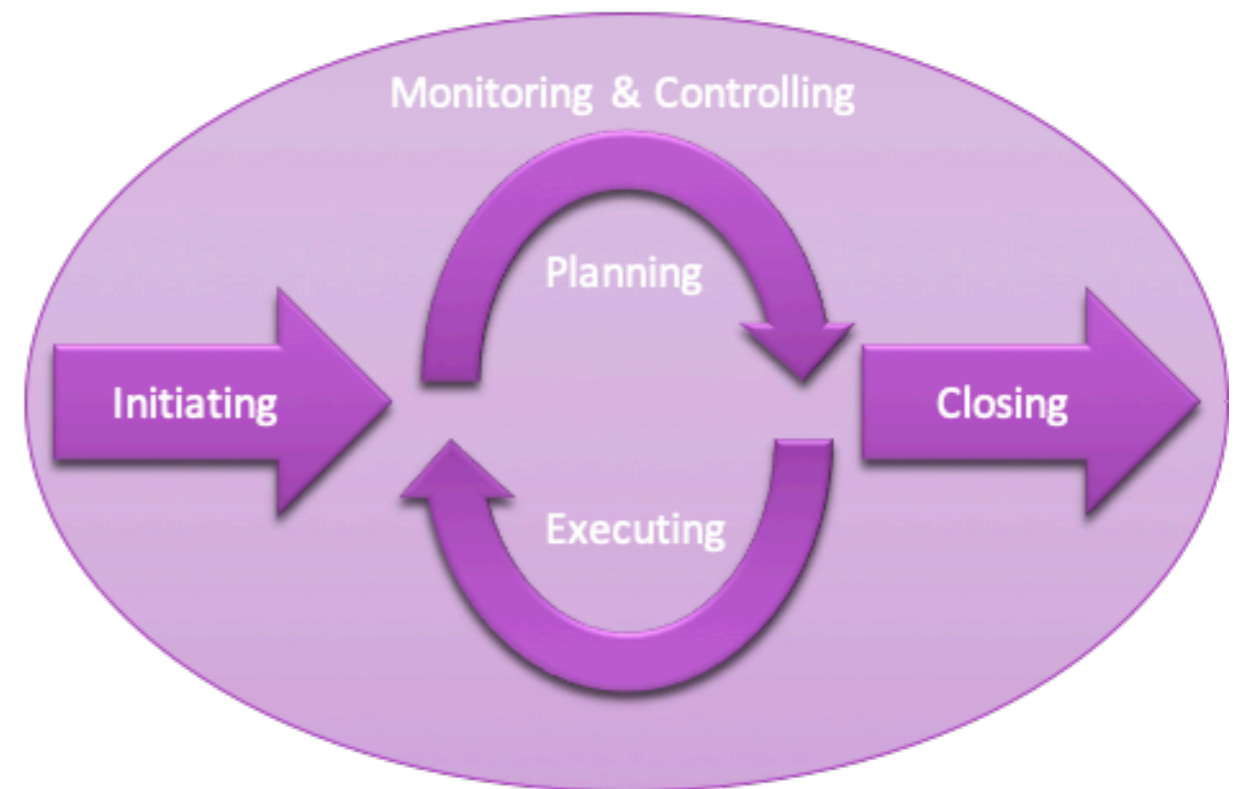
The level of detail to be included is an important consideration also to be negotiated with the Project Sponsor. Essentially the status report summarises the following:

Schedule - original approved completion date, authorised changes and current estimated completion date

Budget - original approved budget, authorised changes and current estimated budget

Issues - any issues or risks triggered that have resulted in approved changes to scope, schedule, budget, quality or functionality.

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LEARNING
EXPERTS