

1.1. Project Life Cycle	
Advantages:	Disadvantages:
<ul style="list-style-type: none"> Provides a structured approach There are defined inputs and outputs for each phase The roles and responsibilities of each project team member are clearly defined Resources can be allocated in advance The project manager can monitor the progress of the project The iterative/phase reviews can be carried out to ensure that the project is meeting the success criteria, objectives and constraints 	<ul style="list-style-type: none"> If the initiation phase has not been completed accurately or completely then later stages will be impacted Project team may be forced to work within tight deadlines which can have an impact on the quality of the output Constant management of the process with strict surveillance is required



1.3. Inputs and Outputs of each Phase		
Phase	Input	Output
<i>Initiation</i>	<ul style="list-style-type: none"> User requirements User constraints 	<ul style="list-style-type: none"> Feasibility report Legislative implications Phase review
<i>Planning</i>	<ul style="list-style-type: none"> Feasibility report Legislative implications 	<ul style="list-style-type: none"> Project plan Test plan Constraints list Phase review
<i>Execution</i>	<ul style="list-style-type: none"> Project plan Test plan Constraints list 	<ul style="list-style-type: none"> Deliverable product Test results Phase review
<i>Evaluation</i>	<ul style="list-style-type: none"> Deliverable product Test results 	<ul style="list-style-type: none"> Release of deliverable product User documentation Final evaluation report

1.2. Interaction and Iteration between Phases		
Interaction:	How the phases link together	
Iteration:	The repeating of a phase.	
Phase	Interaction with:	Iteration with:
<i>Initiation</i>	Planning	–
<i>Planning</i>	Initiation Execution	Initiation
<i>Execution</i>	Planning Evaluation	Planning
<i>Evaluation</i>	Execution	Execution

1.4. Advantages of Setting Objectives
<ul style="list-style-type: none"> They help to identify and meet the client's requirements They are used to measure the success of the final deliverable product Nothing will be left out so the product can be used as soon as it is ready The product will be delivered within the agreed timescale.

1.4. Initial Project Considerations	
User Requirements	<ul style="list-style-type: none"> What the client expects from the final product The project manager refers to them to monitor the project
Success Criteria	<ul style="list-style-type: none"> Used to determine if the project is successfully completed Used in phase reviews Should be measurable, realistic and relevant Refer to user requirements Refer to constraints
Constraints/Limitations	<ul style="list-style-type: none"> Time Resources – budget, hardware and software Regulations/Legislations Security/Risk Management Mitigation of risks
SMART Goals:	Description:
<i>Specific</i>	Details of what the final deliverable product should look like / be able to do
<i>Measurable</i>	Able to look at progress towards the goals during phase reviews
<i>Achievable</i>	Completing the goals within the timeframe set by the client
<i>Realistic</i>	Goals which the team can work towards and complete
<i>Time</i>	Timescale of delivering the final product



1.5. Project Planning Tools (Formal / Informal)

1. Gantt Chart	
Components	<ul style="list-style-type: none"> - Dates/Days along the top - Tasks down the left side - Blocks to represent the time allocated to each task - Milestones - Dependent tasks - Concurrent tasks
Advantages	<ul style="list-style-type: none"> - Can show estimated time schedule - Tasks are shown against a time schedule - Resources for each task can be shown
Disadvantages	<ul style="list-style-type: none"> - Task time is estimated - Task dependencies can be difficult to identify - Can be too simple for a complex project
2. PERT Chart	
Components	<ul style="list-style-type: none"> - Nodes/sub-nodes - Time/duration lines - Task sequences - Dependent tasks - Concurrent tasks - Can show critical path
Advantages	<ul style="list-style-type: none"> - Can show slack time so resources can be reallocated - Enables timescales to be planned more precisely - Tasks can be scheduled as dependent or concurrent - Manages unpredictable activities
Disadvantages	<ul style="list-style-type: none"> - Can be confusing - Needs skill and knowledge to create - Can be too simple for a large or complex project
3. Critical Path	
Components	<ul style="list-style-type: none"> - Nodes/sub-nodes - Time/duration lines - Task sequences - Dependent tasks - Concurrent tasks
Advantages	<ul style="list-style-type: none"> - Helps to control cost and time - Manages well defined activities - Suitable for non-research projects - Suitable for reasonable time estimates
Disadvantages	<ul style="list-style-type: none"> - Not suitable for research and development projects - Needs skill and knowledge to create

4. Visualisation Diagram	
Components	<ul style="list-style-type: none"> - Multiple images/graphics - Size/position of images/graphics - Position/style of text - Fonts - Annotations - Colours/themes
Advantages	<ul style="list-style-type: none"> - Data can be quickly understood - Easy to spot emerging trends/patterns - Non-specialists can understand the data shown
Disadvantages	<ul style="list-style-type: none"> - Not appropriate for a large or complex project
5. Flow Chart	
Components	<ul style="list-style-type: none"> - Start point - End point - Decisions - Processes - Connecting lines - Directing arrows
Advantages	<ul style="list-style-type: none"> - Useful for a small project with a small number of tasks and decisions - No specialist knowledge required to understand the flow chart
Disadvantages	<ul style="list-style-type: none"> - Does not show time allocated for each task - Tasks are shown sequentially so does not show concurrent tasks
6. Mind Map	
Components	<ul style="list-style-type: none"> - Nodes/sub-nodes - Branches/connecting lines - Key words - Colours - Images
Advantages	<ul style="list-style-type: none"> - Easy to add ideas/tasks at any time - Can provide focus on the tasks to be completed - Shows dependent tasks
Disadvantages	<ul style="list-style-type: none"> - No time schedule - Can be difficult for others to understand - Does not show concurrent tasks



7. Task List	
Components	<ul style="list-style-type: none"> - Tasks/sub-tasks - Start date - End date - Duration - Resources
Advantages	<ul style="list-style-type: none"> - Can provide focus on the tasks to be completed - No tasks will be missed out
Disadvantages	<ul style="list-style-type: none"> - Should not be used for a large or complex project

1.5. Software's to create Project Plans	
Software	Project Plan
<i>Project Management Software</i>	<ul style="list-style-type: none"> ▪ Gantt chart ▪ PERT Chart ▪ Critical path
<i>Spreadsheet</i>	<ul style="list-style-type: none"> ▪ Simple Gantt chart ▪ Task list
<i>Word Processor</i>	<ul style="list-style-type: none"> ▪ Task list ▪ Mind map ▪ Flow chart
<i>Desktop Publishing</i>	<ul style="list-style-type: none"> ▪ Visualisation diagram ▪ Mind map

1.5. Project Management Software	
Advantages:	Disadvantages:
<ul style="list-style-type: none"> ▪ Real-time changes can be made ▪ Project plans can be share electronically ▪ Project plans can include allocated resources ▪ Reports can be generated 	<ul style="list-style-type: none"> ▪ Can be expensive ▪ There is a possibility that a simple project can become very complicated ▪ Can be time-consuming to set up a project ▪ May need some knowledge, training or experience to use