

Syllabus for the APMP Examination

Second Edition

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on behalf of APM's Professional Board

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General Introduction

1 Introduction

- 1.1 The APMP is a baseline foundation level qualification for those working in project management as specialists who need to understand project management in order to achieve efficiency and effectiveness.
- 1.2 The APMP examination is designed to determine an individual's knowledge of project management, sufficient to be an informed member of a project team.
- 1.3 The syllabus defines the topics that a candidate taking the APMP examination is expected to be knowledgeable of.
- 1.4 The syllabus is derived from the APM Body of Knowledge and is set at an entry level suitable for informed members of project teams. It is generally in accordance with BS6079 although it covers additional topics allowing for wider interpretation in some areas.

2 Syllabus Structure

The syllabus structure corresponds to Version 4 of APM Body of Knowledge.

It is in two parts:

- Part 1, the detailed syllabus, defines the project management topics
- Part 2 defines the learning objectives of a candidate studying to meet the requirements of the APMP examination

Each of these parts is referenced in accordance with the APM Body of Knowledge.

There are two appendices that form integral parts of the syllabus:

- Appendix 1 is a glossary of project management terms that may be used in the syllabus or examination. (It is appreciated that alternative terms may be used in different industries. These are the generic terms to be used for APMP examination purposes).
- Appendix 2 is an index of references where more details can be found on the topics of the syllabus. This is included as guidance to indicate the interpretation to be used for the various topics and is particularly important in those cases where work by different authors is at variance. The level of detail provided within the references may not be representative of the APMP examination. This must be determined from the syllabus itself and the learning objectives.

The overall structure of both the Syllabus and the Body of Knowledge is given on the diagram overleaf.

APMP Syllabus Structure and Relationship with Body of Knowledge

<p>General</p> <p>1.0 Project Management 1.1 Programme Management 1.2 Project Context</p>	<p>Strategic</p> <p>2.0 Project Success Criteria 2.1 Strategy/Project Management Plan 2.2* Value Management 2.3 Risk Management 2.4 Quality Management 2.5 Health, Safety and Environment</p>
.....	
<p>Control</p> <p>3.0 Work Content and Scope Management 3.1 Time Scheduling/Phasing 3.2 Resource Management 3.3 Budgeting and Cost Management 3.4 Change Control 3.5 Earned Value Management 3.6 Information Management</p>	<p>Organisational</p> <p>6.0 Life Cycle Design and Management 6.1* Opportunity 6.2* Design and Development 6.3* Implementation 6.4 Hand-over 6.5 (Post) Project Evaluation Review 6.6 Organisation Structure 6.6 Organisation Roles</p>
<p>Technical</p> <p>4.0* Design, Implementation and Hand-Over Management 4.1* Requirements Management 4.2 Estimating 4.3* Technology Management 4.4* Value Engineering 4.5* Modelling and Testing 4.6 Configuration Management</p>	<p>People</p> <p>7.0 Communication 7.1 Teamwork 7.2 Leadership 7.3 Conflict Management 7.4 Negotiation 7.5* Personnel Management</p>
<p>Commercial</p> <p>5.0 Business Case 5.1* Marketing and Sales 5.2* Financial Management 5.3 Procurement 5.4* Legal Awareness</p>	<p>* Not included in the APMP syllabus</p>

3 Body of Knowledge (BoK) categories not included in the APMP Syllabus

A number of BoK categories are not specifically included in the APMP syllabus. In some cases such as Value Management (BoK reference 2.2) this is because the subject is considered to be too advanced for a generic foundation level. Other topics such as Organisational – Design and Development and Implementation (BoK references 6.2 and 6.3) are phase specific and are covered within the syllabus under other generic headings which apply to all project phases.

4 Additional Reading

Candidates for the APMP examination are expected to have read the following documents:

- i) APM Body of Knowledge Version 4
- ii) BS6079-1:2000 Guide to Project Management
- iii) Syllabus for the APMP Examination
- iv) The Learning Objectives

In addition it is expected that the candidates will be familiar with the Glossary of Terms and material from a significant number of the referenced texts.

Part 1 – Detailed Syllabus

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Part 1 – Detailed Syllabus

In the tables that follow, the topics identified in the APM Body of Knowledge are expanded to identify the subjects to be assessed in the APMP examination. The depth of knowledge required for each topic is determined by the learning objectives given in Part 2. The codes in the reference column identify references where more information may be found. These are listed in Appendix 2.

In many cases the references cover topics in more depth than that required by the APMP examination. A suitable level may be determined by reference to the learning objectives.

Item	Title	Details	Ref
1	General	<i>An overview of project and programme management</i>	
1.0	Project Management	<ul style="list-style-type: none"> ● Definition of what a project is ● Definition of Project Management ● The overall processes of project management ● Identification of project management processes ● The reason for the employment of project management in order to introduce change; the importance of time, cost, performance quality 	<p><i>GPMT</i></p> <p><i>BoK</i></p> <p><i>BS1-5</i> <i>BS2</i></p> <p><i>AH1</i></p> <p><i>RT3.1</i></p>
1.1	Programme Management	<ul style="list-style-type: none"> ● The definition of Programme Management ● The overall process of Programme Management ● Key roles in Programme Management ● Benefits of Programme and Portfolio Management ● The definition of Portfolio Management 	<p><i>CC</i> <i>GR1</i></p> <p><i>RB2</i></p> <p><i>BoK</i></p>
1.2	Project Environment Context	<ul style="list-style-type: none"> ● The context in which a project is formulated, assessed and realised – internal and external 	<p><i>RT4.3</i> <i>CK4</i> <i>JKP5</i> <i>MFLK10</i></p>

Item	Title	Details	Ref
		<ul style="list-style-type: none"> ● The project's strategic setting ● PESTLE Analysis (Political, Economic, Sociological, Technical, Legal, Environmental) (include geographic, cultural and climatic considerations as well) ● The need to manage peers, superiors and other stakeholders in a project context 	<p><i>RT4.3</i></p> <p><i>CK4</i></p> <p><i>JKP5</i></p> <p><i>MFLK10</i></p>
2	Strategic	<i>The Project's Strategic framework and an Organisation's Crucial Systems and Procedures</i>	
2.0	Project Success Criteria	<ul style="list-style-type: none"> ● Project success criteria (both specific and contextual) ● Project success factors (success factors can be different from different participant's points of view) ● Use of key performance indicators (measures on which the project will be judged when evaluating success or failure) 	<p><i>CK1</i></p> <p><i>HK2</i></p> <p><i>MFLK3</i></p>
2.1	Strategy/Project Management Plan	<ul style="list-style-type: none"> ● Development of project strategy from many aspects: business opportunity, marketing, risk management, consideration of alternative solutions, political, geographical, economic ethical and financial considerations ● The project manager's interpretation of 'why' the change is needed and 'what' is required from the business case ● The scope and project manager's vision of all major facets of the project from its initiation to implementation and/or disposal of the product or service ● Statement of Requirements, Project Brief, Project Objectives, Terms of Reference, Scope of Work ● Project Execution Strategy – how the project's deliverables are to be achieved ● 'When', 'where' and 'who', with terms of reference for the project manager and his/her project team ● Key dates ● Priorities between time, cost and quality objectives ● Factors to be considered when setting up the project organisation and administration 	<p><i>BS1-5</i></p> <p><i>AH2</i></p>
		<ul style="list-style-type: none"> ● The Project Management Plan (or Project Initiation Document) as a reference tool for managing a project 	<i>BS1-5</i>

Item	Title	Details	Ref
		<ul style="list-style-type: none"> ● Its purpose, ownership by the project manager, authorship and readership ● The content and structure of the Project Management Plan which might include the following areas: scope, technical, organisation, time and progress, cost, procurement and contracting, quality, administration and co-ordination, health and safety, risk and other topics covered in an organisation's project management methodology 	<i>BS1-5</i>
2.2	Value Management	Not included in the APMP syllabus	
2.3	Risk Management	<ul style="list-style-type: none"> ● Risk definition (both threat and opportunity) ● Risk terminology ● Risk processes ● Identification techniques: – brainstorming, workshop, prompt lists, check lists, SWOT analysis, assumptions analysis ● Risk assessment – qualitative, statistical methods, probability/impact, quantitative-modelling, 'S' Curves, criticality index ● Planning strategies – avoidance, transfer, mitigation, control ● Acceptance and management of foreseen risk ● Contingency ● Assignment of risk ownership and the risk log/risk register ● Risk reporting ● Benefits and cost of Risk Management 	<i>SHN</i> <i>RT2.1</i> <i>NJS1</i> <i>RT4.9</i>
2.4	Quality Management	<ul style="list-style-type: none"> ● Definitions ● Quality management systems ● Quality Planning, Quality Assurance and Quality Control in a project environment ● The cost and benefits of quality ● Project standards and procedures 	<i>BW1</i> <i>JFW1</i> <i>RT4.7</i> <i>AH3</i>
2.5	Health, Safety, and Environment	<ul style="list-style-type: none"> ● The Employer's General Duty of Care ● The responsibilities of project personnel ● Health and Safety at Work Legislation relevant to the management of projects ● Statutory requirements relevant to project management ● Health and Safety at Work Act 1977 ● Health and Safety reporting 	<i>J51</i>

Item	Title	Details	Ref
3	Control	<i>Planning, measuring and monitoring performance and taking effective remedial actions</i>	
3.0	Work Content and Scope Management	<ul style="list-style-type: none"> ● High level definition of project scope ● Project objectives ● The definition of the project deliverables via the Product Breakdown Structure (PBS) ● The detailed definition of manageable pieces of work through the Work Breakdown Structure (WBS) ● Features and definition of the WBS ● Use of the WBS to assist with the codification of all project activities ● The correlation from the WBS to who is responsible and where work is carried out via the organisational breakdown structure (OBS) ● The responsibility matrix (or responsibility assignment matrix) ● The cost breakdown structure (CBS) ● Relationships between the PBS, WBS, OBS and CBS ● Understanding the relationships between the WBS, Scheduling Networks, Responsibility Matrices, Resourcing and the development of the structure for progress monitoring through Earned Value Analysis 	<p><i>MFLK9</i></p> <p><i>GR2</i></p> <p><i>AH4</i></p> <p><i>RT3.2</i></p>
3.1	Time Scheduling/ Phasing	<ul style="list-style-type: none"> ● Project master schedule ● Milestone planning technique ● The use of Milestones for monitoring progress ● Gantt/bar-chart: reporting ● Relationship between bar charts and networks ● Network techniques ● Types of network links ● Critical path analysis/method (CPA/CPM) ● Total and free floats ● Time reporting ● Understanding and use of the critical path as a management tool ● Measuring and reporting progress 	<p><i>MFLK1</i></p> <p><i>RT4.4</i></p> <p><i>KLJG2</i></p> <p><i>KLJG3</i></p> <p><i>MFLK1</i></p> <p><i>RT4.5</i></p>
3.2	Resource Management	<ul style="list-style-type: none"> ● Planning, allocating and scheduling resources to tasks ● Knowledge of resource levelling and smoothing techniques ● Mobilisation/demobilisation schedules ● Resource histogram and 'S' curves 	<p><i>MFLK5</i></p> <p><i>KLJG1</i></p>
3.3	Budgeting and Cost Management	<ul style="list-style-type: none"> ● Elements of project cost ● The Cost Breakdown Structure (CBS) ● Budgets and budget approvals ● The cost commitment profile 	<p><i>BS1-4</i></p> <p><i>NJS4</i></p>

Item	Title	Details	Ref
		<ul style="list-style-type: none"> ● Cost reporting – planned, actual, forecast ● Techniques for monitoring and controlling project costs 	<p><i>BS1-4</i> <i>NJS4</i></p>
		<ul style="list-style-type: none"> ● Methods of payment and their uses – progress payments, milestone payments, incentive payments 	<i>SIG1.1</i>
3.4	Change Control	<ul style="list-style-type: none"> ● What is a change? ● Management of change, why is it necessary? ● Types of change: scope, technical, cost, time, resources, quality ● The need for change control ● Impact assessment of changes on projects ● Change definition ● Formal change control procedures ● Change requests, authorisation to prepare change request, approvals of change requests, variation orders ● Change log/change register <p>(See also Configuration Management, section 4.6)</p>	<p><i>MFLK7</i> <i>DL1</i> <i>AH14</i></p>
3.5	Earned Value Management	<ul style="list-style-type: none"> ● Project performance status reporting ● The terminology employed ● The merits of Earned Value Analysis ● Use of earned value analysis using both money or other measuring units ● The earned value chart and 'S' curve ● Understanding of the terms: <ul style="list-style-type: none"> – Budget cost of work scheduled (BCWS) – Budget cost of work performed (BCWP) – Actual cost of work performed (ACWP) – Cost variance (CV) – Schedule variance (SV) – Efficiency (=BCWP/ACWP) – Cost and schedule performance indexes (CPI and SPI) – Budget at completion (BAC) – Expected cost to completion (ECTC) ● Earned value tabulations and calculation of overall project performance and performance indices ● Calculation of likely completion dates from earned value data ● Calculation of likely cost to completion from earned value data ● Segregation of productive activities from non productive activities for the purpose of progress analysis and prediction 	<p><i>BS1-5</i> <i>NJS3</i> <i>AL1</i> <i>AH5</i></p>
3.6	Information Management	<ul style="list-style-type: none"> ● Project communications and information flows ● Establishing communications routes on projects ● The main types of project information systems ● Sources of project information 	<p><i>HK4</i> <i>CK3</i></p>

Item	Title	Details	Ref
		<ul style="list-style-type: none"> ● Reference documentation ● Project reporting, reporting levels, methods of presenting data and information. Project report structure ● Document management and Information audit trail ● Project archiving ● The role of information systems 	<p><i>HK4</i></p> <p><i>CK3</i></p>
4	Technical	<i>Managing the technical aspects of projects</i>	
4.0	Design, Implementation and Hand-Over Management	Not included in the APMP syllabus	
4.1	Requirements Management	Not included in the APMP syllabus	
4.2	Estimating	<ul style="list-style-type: none"> ● Types of estimate, estimates at different stages of the project lifecycle ● Estimating methods such as: <ul style="list-style-type: none"> – Parametric, comparative, analytical (bottom up) ● Accuracy of estimates 	<p><i>RT2.2</i></p> <p><i>AH6</i></p> <p><i>DL2</i></p> <p><i>HK5</i></p> <p><i>NS1</i></p>
4.3	Technology Management	Not included in the APMP syllabus	
4.4	Value Engineering	Not included in the APMP syllabus	
4.5	Modelling and Testing	Not included in the APMP syllabus	
4.6	Configuration Management	<ul style="list-style-type: none"> ● The identification and specification of the configuration items of the final product ● Managing the documentation of the developing product/service – administrative systems ● Managing configuration control: <ul style="list-style-type: none"> – Recording changes to documents – Cross referencing of technical documentation – Configuration reviews – Managing the status of approved and pending changes to project deliverables – Status accounting <p>(See also Change Control – Section 3.4)</p>	<p><i>RT4.2</i></p> <p><i>PR2.1</i></p> <p><i>AH 13</i></p>

Item	Title	Details	Ref
5	Commercial	<i>The Commercial Aspects of Project Management</i>	
5.0	Business Case	<ul style="list-style-type: none"> ● What is a business case? ● Content and purpose of the business case ● The project setting within the organisation's business strategy ● The sponsor/client/customer's particular business objectives/requirements ● Ownership by the sponsor/client/customer/project manager: ● The form of request from verbal to the substantial document defining the 'why' for the project ● The minimum scope; time, cost performance/quality, deliverables, sponsor/client/customer risks ● Investment appraisal; review all feasible options; the use of Net Present Value through Discounted Cash Flow. Use of Internal Rate of Return and payback period ● Stakeholder analysis 	<p>PR2.2</p> <p>AH7</p> <p>RT2.3</p> <p>JFW2</p>
5.1	Marketing and Sales	Not included in the APMP syllabus	
5.2	Financial Management	Not included in the APMP syllabus	
5.3	Procurement	<ul style="list-style-type: none"> ● What is procurement? ● Purchasing of goods ● Contracting, strategy, types of contract ● Procurement policies and strategies ● Selecting and managing contractors and suppliers ● Pre-qualification of contractors and suppliers, bidders conferences 	<p>SIG1</p> <p>DL3</p> <p>NJS2</p> <p>HK1</p> <p>RT2.4</p> <p>NJS5</p> <p>DL4</p>
5.4	Legal Awareness	Not included in the APMP syllabus	
6	Organisational	<i>Organising the Management of the Project</i>	
6.0	Life Cycle Design and Management	<ul style="list-style-type: none"> ● The need to break the project into a life cycle of phases and or stages ● Basic project lifecycle, extended project lifecycle ● Typical phases of a lifecycle and their content ● Phase review and approval ● Go-no-go decisions 	<p>BS1.1</p> <p>RT4.6</p> <p>AH8</p>
6.1	Opportunity	Not included in the APMP syllabus	

Item	Title	Details	Ref
6.2	Design and Development	Not included in the APMP syllabus	
6.3	Implementation	Not included in the APMP syllabus	
6.4	Hand-Over	<ul style="list-style-type: none"> ● Managing hand-over and close-out ● Hand-over to client/user/operations ● Formally closing the project 	<p><i>JKP4</i></p> <p><i>MFLK6</i></p> <p><i>RB1</i></p> <p><i>RT4.8</i></p>
6.5	(Post) Project Evaluation Review	<ul style="list-style-type: none"> ● The purpose and content of the post project review ● The data reviewed ● Project histories, diaries, files ● The need to learn from experience ● The post-project report and analysis 	<i>RB2</i>
6.6	Organisation Structure	<ul style="list-style-type: none"> ● The project within the organisation ● The three basic kinds of project structure; functional, project and matrix. Advantages, disadvantages and application of each ● Project location – task forces ● The project organisation breakdown structure (OBS) ● Different organisations for different project phases 	<p><i>RT3.1</i></p> <p><i>BS1.2</i></p> <p><i>BS1.3</i></p> <p><i>AH9</i></p> <p><i>HK3</i></p>
6.7	Organisational Roles	<ul style="list-style-type: none"> ● Roles, duties and responsibilities commonly found in project organisations to include but not limited to: Sponsor, project manager, project team member, user, stakeholder, project co-ordinator, project support officer, quality manager, resource manager, procurement manager, project administrator. (Those roles highlighted in bold are considered to be the main project management roles) ● Delegation and accountability relationships ● Responsibility and authority relationships 	<p><i>AH10</i></p> <p><i>GPMT</i></p> <p><i>BoK</i></p>
7	People	<i>The Human Aspects of Project Management</i>	
7.0	Communication	<ul style="list-style-type: none"> ● Communication, a fundamental in project management: <ul style="list-style-type: none"> – Methods of communicating, formal, informal – Communications media – visual, oral, body language, written and electrical/electronic ● Barriers to communications ● The communications process 	<i>HK4</i>

Item	Title	Details	Ref
		<ul style="list-style-type: none"> ● Purpose and scope of meetings, the conduct of meetings 	<i>HK4</i>
7.1	Teamwork	<ul style="list-style-type: none"> ● Advantages and disadvantages of team working, types of teams ● Characteristics of teams ● Social relationships ● Stages of team development-Tuckman Model <ul style="list-style-type: none"> – Forming, storming, norming, performing ● The Belbin Team Roles classification 	<i>RT3.4</i> <i>JKP3</i> <i>AH11</i>
7.2	Leadership	<ul style="list-style-type: none"> ● The leadership role, attributes and skills of the Project Manager ● Influence, motivation and reward: <ul style="list-style-type: none"> – Understanding of Maslow’s hierarchy of needs – Herzberg’s hygiene theory ● Setting goals and objectives ● Situational leadership model (Hersey and Blanchard) ● Morale building 	<i>CK2</i> <i>RT3.3</i> <i>MFLK11</i>
7.3	Conflict Management	<ul style="list-style-type: none"> ● The nature and impact of conflict: ● Identifying sources of conflict ● Conflict and the project lifecycle ● Avoiding conflict ● Methods of resolving conflict 	<i>JKP1</i> <i>HK6</i> <i>AH12</i>
7.4	Negotiation	<ul style="list-style-type: none"> ● The need for negotiation ● Objectives ● Preparation ● Strategies and tactics – discussing, listening, proposing, signalling, agreeing ● Non-verbal behaviour ● Manage expectations 	<i>MFLK2</i> <i>JKP2</i>
7.5	Personnel Management	Not included in the APMP syllabus	

End of Syllabus

Notes

Part 2 Learning Objectives

The learning objectives for a candidate studying for the APMP examination are given in the table below. These are in accordance with the APM Body of Knowledge categories. Unless otherwise stated, the candidate is expected to be able to describe, explain and demonstrate a basic understanding of each topic appropriate to each of the main project phases.

	Topic	Learning Objectives The Candidate will be able to :
1	General	
1.0	Project Management	<ul style="list-style-type: none"> i. Define what a project is ii. Define Project Management
1.1	Programme Management	<ul style="list-style-type: none"> i. Define the terms 'Programme Management' and 'Portfolio Management' ii. Describe the benefits of managing groups of projects within an organisation
1.2	Project Environment Context	<ul style="list-style-type: none"> i. State the important factors of a project's context ii. Describe the effects of these context factors on a project iii. Explain the need for stakeholder management
2	Strategic	
2.0	Project Success Criteria	<ul style="list-style-type: none"> i. Describe project success criteria and success factors ii. List suitable performance indicators to apply to project success factors
2.1	Strategy/Project Management Plan	<ul style="list-style-type: none"> i. Outline the kinds of plan the project manager will need to make ii. When describing and explaining the Project Management Plan, also explain its purpose, content, authorship, readership and ownership
2.2	Value Management	Not included in the APMP syllabus
2.3	Risk Management	<ul style="list-style-type: none"> i. Outline the importance of risk management ii. Describe the project risk management process iii. Discuss the role of quantitative analysis iv. Identify and evaluate risks and draw up a risk management plan

Topic	Learning Objectives The Candidate will be able to :
2.4 Quality Management	<ul style="list-style-type: none"> i. Explain the purpose of common quality techniques ii. Explain the differences between quality planning, quality control, and quality assurance
2.5 Health, Safety and Environment	<ul style="list-style-type: none"> i. Discuss the relevant Health and Safety standards as applicable to project management
<hr/>	
3 Control	
<hr/>	
3.0 Work Content and Scope Management	<ul style="list-style-type: none"> i. Discuss and describe the main break down structures ii. Demonstrate understanding of the fundamental relationships between the breakdown structures
3.1 Time Scheduling/Phasing	<ul style="list-style-type: none"> i. Demonstrate the use of different techniques for scheduling projects from Gantt charts to networks ii. Produce a time schedule
3.2 Resource Management	<ul style="list-style-type: none"> i. Produce a resource allocation schedule in both time- and resource-limited situations ii. Demonstrate the use of resource histograms and 'S' curves
3.3 Budgeting and Cost Management	Describe reasons for, and methods of, cost management
3.4 Change Control	<ul style="list-style-type: none"> i. Explain the reasons for requiring change control ii. Describe a change control procedure, and give proof that it can be used iii. Ask questions to identify possible change control problems
3.5 Earned Value Management	<ul style="list-style-type: none"> i. Explain and demonstrate how an earned value system works ii. Use earned value to produce measures of progress against the plan and of expenditure against a budget iii. Use earned value to predict out-turn costs and out-turn durations
3.6 Information Management	<ul style="list-style-type: none"> i. Devise an information management plan and reporting structure, and demonstrate its use ii. Demonstrate methods which will ensure the maximum communication of information

	Topic	Learning Objectives The Candidate will be able to :
4	Technical	
4.0	Design, Implementation and Hand-Over Management	Not included in the APMP syllabus
4.1	Requirements Management	Not included in the APMP syllabus
4.2	Estimating	<ul style="list-style-type: none"> i. Structure a project cost estimate ii. Advise on the accuracy of estimates required and achievable at each stage of a project iii. Explain different estimation methods iv. Estimate the effort needed to execute a project
4.3	Technology Management	Not included in the APMP syllabus
4.4	Value Engineering	Not included in the APMP syllabus
4.5	Modelling and Testing	Not included in the APMP syllabus
4.6	Configuration Management	<ul style="list-style-type: none"> i. Explain the requirements for configuration management ii. Define the terms configuration control, configuration identification, configuration status accounting, configuration auditing
5	Commercial	
5.0	Business Case	<ul style="list-style-type: none"> i. Demonstrate understanding of the term ii. Demonstrate knowledge of the content of the business case iii. Demonstrate knowledge of Internal Rate of Return (IRR), Net Present Value (NPV) and payback periods iv. Define and describe the responsibilities of those involved in the business plan
5.1	Marketing and Sales	Not included in the APMP syllabus
5.2	Financial Management	Not included in the APMP syllabus
5.3	Procurement	<ul style="list-style-type: none"> i. Define the terms, and demonstrate a knowledge of purchasing and contracting methods ii. Outline the principles of managing suppliers and contractors
5.4	Legal Awareness	Not included in the APMP syllabus

Topic		Learning Objectives
		The Candidate will be able to :
6	Organisational	
6.0	Life Cycle Design and Management	<ul style="list-style-type: none"> i. Describe a basic project life-cycle ii. Define the reasons for managing projects in 'life cycles'
6.1	Opportunity	Not included in the APMP syllabus
6.2	Design and Development	Not included in the APMP syllabus
6.3	Implementation	Not included in the APMP syllabus
6.4	Hand-Over	Describe a process for hand-over and close-out
6.5	(Post) Project Evaluation Review	Demonstrate knowledge of a post project review and its place in the project life-cycle
6.6	Organisation Structure	<ul style="list-style-type: none"> i. Recognise the different types of project organisation and assess their merits. ii. Outline the factors to be considered when setting up the project organisation and its administration.
6.6	Organisational Roles	Define the different roles required in the management of projects
7	People	
7.0	Communication	<ul style="list-style-type: none"> i. Describe different methods of communicating ii. Describe methods of ensuring that meetings are correctly conducted
7.1	Teamwork	<ul style="list-style-type: none"> i. Identify the needs of teams ii. Recognise different types of team organisation iii. Understand the different social roles needed in teams
7.2	Leadership	<ul style="list-style-type: none"> i. Understand how to build and motivate a team ii. Define the qualities needed for leadership
7.3	Conflict Management	<ul style="list-style-type: none"> i. Define conflict and where it may be found in projects ii. Describe the strategies for dealing with conflict and demonstrate understanding of their use iii. Show awareness of causes of and reasons for conflict
7.4	Negotiation	<ul style="list-style-type: none"> i. Demonstrate knowledge of negotiation techniques ii. Describe negotiation with different management elements around a project (e.g. senior managers, line managers)
7.5	Personnel Management	Not included in the APMP syllabus

Appendix 1

Glossary of Project Management Terms

The terms defined in the following pages are those that will be used for the syllabus of the APMP qualification and also for the examination questions. In compiling the Glossary the author has, as far as possible, used definitions and terms that are common to a wide range of industries.

It is appreciated that different industries use the same term with different meanings and different terms for the same thing. Similarly, different authors may use terms in different ways. Where this is the case, candidates should make themselves aware of the differences and take them into account in answering the examination questions.

The purpose of this glossary is not to identify who is wrong and who is right but to give a common vocabulary for the purpose of the qualification. Terms defined in the British Standard are indicated by means of an asterisk*. Qualifications, acceptable alternatives or further explanations to the British Standard definition are shown in parenthesis.

Acknowledgements

In compiling this glossary the Association has used materials and taken advice from many different sources. Those who have helped are gratefully acknowledged. Unfortunately, many definitions and models have passed from author to author and it is not appropriate to give acknowledgements for the many areas where one definition or term has been chosen in preference to others.

Michael Hougham
May 2000

A**Abstract Resource***

Imaginary resource introduced so that its availability and activity requirement gives an extra means of control.
(For example, two jobs not being worked upon simultaneously in order to obviate an accident hazard.)

Acceptance

The formal process of accepting delivery of a product or a deliverable.

Acceptance Criteria*

Performance requirements and essential conditions that have to be achieved before project deliverables are accepted.

Acceptance Test*

Formal, pre-defined test conducted to determine the compliance of the deliverable item(s) with the acceptance criteria.

Accrued Costs*

Costs that are earmarked for the project and for which payment is due, but has not been made.

Acquisition Strategy

Determining the most appropriate means of procuring the component parts or services of a project.

Activity*

Task, job, operation or process consuming time and possibly other resources.

(The smallest self-contained unit of work used to define the logic of a project. In general, activities share the following characteristics: a definite duration, logic relationships to other activities in a project, use resources such as people, materials or facilities, and have an associated cost. They should be defined in terms of start and end dates and the person or organisation responsible for their completion.)

Activity Definition

Identifies the specific activities that must be performed in order to produce project deliverables.

Activity Duration

Activity duration specifies the length of time (hours, days, weeks, months) that it takes to complete an activity.

Activity File

A file containing all data related to the definition of activities on a particular project.

Activity ID

A unique code identifying each activity in a project.

Activity-on-Arrow Network*

Arrow diagram, Network in which the arrows symbolise the activities.

Activity on Node Network*

Precedence diagram, a network in which the nodes symbolise the activities.

Activity Status

The state of completion of an activity. A planned activity has not yet started. A started activity is in progress. A finished activity is complete.

Actual Cost*

Incurred costs that are charged to the project budget and for which payment has been made, or accrued.

Actual Cost of Work Performed (ACWP)*

Cumulative cost of work accrued on the project in a specific period or up to a specific stage. Note: for some purposes cost may be measured in labour hours rather than money.

Actual Dates

Actual dates are entered as the project progresses. These are the dates that activities really started and finished as opposed to planned or projected dates.

Actual Direct Costs

Those costs specifically identified with a contract or project. See also Direct Costs.

Actual Finish

Date on which an activity was completed.

Actual Start

Date on which an activity was started.

Adjourning

The last stage of team building where the team disbands.

Advanced Material Release

A document used by organisations to initiate the purchase of long-lead-time or time-critical materials prior to the final release of a design.

AND Relationship*

Logical relationship between two or more activities that converge on or diverge from an event. Note: The AND relationship indicates that every one of the activities has to be undertaken.

Approval

The term used when an individual accepts a deliverable as fit for purpose so that the project can continue.

Approval to Proceed

Approval given to the project at initiation or prior to the beginning of the next stage.

Arrow*

Directed connecting line between two nodes in a network.

Note 1: It symbolises an activity in 'activity-on-arrow'.

Note 2: It symbolises a dependency relationship in 'activity-on-node' Arrow Diagram*.

See 'activity-on-arrow network'.

Arrow Diagram Method

One of two conventions used to represent an activity in a project. Also known as Activity-on-Arrow or i/j method.

As-Late-As-Possible (ALAP)

An activity for which the early start date is set late as possible without delaying the early dates of any successor.

Associated revenue*

That part of a project cost that is of a revenue nature and therefore charged as incurred to the profit and loss account. Note: Associated revenue differs from the capital element of the project in that the capital element is taken as an asset to the balance sheet and depreciated over future accounting periods.

As-Soon-As-Possible (ASAP)

An activity for which the early start date is set to be as soon as possible. This is the default activity type in most project management systems.

Assumptions

Statements taken for granted or truth.

Audit*

Systematic retrospective examination of the whole, or part, of a project or function to measure conformance with predetermined standards. Note: Audit is usually qualified, for example financial audit, quality audit, design audit, project audit, health and safety audit.

Authorisation

The decision that triggers the allocation of funding needed to carry on the project

Authorised Un-priced Work

Any scope change for which authorisation to proceed has been given, but for which the estimated costs are not yet settled.

Authorised Work

The effort which has been defined,

plus that work for which authorisation has been given, but for which defined contract costs have not been agreed upon.

Automatic Decision Event*

Decision event where the decision depends only on the outcome of the preceding activities and that can be programmed or made automatic.

B

Backward Pass*

Procedure whereby the latest event times or the latest finish and start times for the activities of a network are calculated.

Balanced Matrix

An organisational matrix where functions and projects have the same priority.

Bar Chart*

Chart on which activities and their durations are represented by lines drawn to a common time scale. Note 1: A Gantt chart is a specific type of bar chart and should not be used as a synonym for bar chart. Note 2: See also 'cascade chart'.

Baseline*

Reference levels against which the project is monitored and controlled.

Baseline Cost

The amount of money an activity was intended to cost when the schedule was baselined.

Baseline Dates

Original planned start and finished dates for an activity. Used to compare with current planned dates to determine any delays. Also used to calculate budgeted cost of work scheduled for earned-valued analysis.

Baseline Review

A customer review conducted to determine that a contractor is continuing to use the previously accepted performance system and is properly implementing a baseline on the contract or option under review.

Baseline Schedule

The baseline schedule is a fixed project schedule. It is the standard by which project performance is measured. The current schedule is copied into the baseline schedule which remains frozen until it is reset. Resetting the baseline is done when the scope of the project has been changed significantly, for example after a negotiated change. At that point, the original or current

baseline becomes invalid and should not be compared with the current schedule.

Benefits

The enhanced efficiency, economy and effectiveness of future business or other operations to be delivered by a project or programme.

Benefits Framework

An outline of the expected benefits of the project or programme, the business operations affected and current and target performance measures.

Benefits Management

Combined with project or programme management, Benefits Management is the process for planning, managing, delivering and measuring the project or programme benefits.

Benefits Management Plan

Specifies who is responsible for achieving the benefits set out in the benefit profiles and how achievement of the benefits is to be measured, managed and monitored.

Bid

A tender, quotation or any offer to enter into a contract

Bid Analysis

An analysis of bids or tenders.

Bottom Up Cost Estimating

This is the method of making estimates for every activity in the work breakdown structure and summarising them to provide a total project cost estimate.

Brainstorming

The unstructured generation of ideas by a group of people.

Branching Logic*

Conditional logic. Alternative paths in a probabilistic network.

Breakdown Structure

A hierarchical structure by which project elements are broken down, or decomposed. See also Product Breakdown Structure (PBS), Organisational Breakdown Structure (OBS) and Work Breakdown Structure (WBS).

Budget*

Quantification of resources needed to achieve a task by a set time, within which the task owners are required to work. Note: A budget consists of a financial and/or quantitative statement, prepared and approved prior to a defined period, for the purpose of attaining a given

objective for that period. (The planned cost for an activity or project.)

Budgetary Control*

System of creating budgets, monitoring progress and taking appropriate action to achieve budgeted performance. Note: A budget should provide the information necessary to enable approval, authorisation and policy-making bodies to assess a project proposal and reach a rational decision.

Budget Cost

The cost anticipated at the start of a project.

Budget at Completion (BAC)

The sum total of the time-phased budgets.

Budgeted Cost of Work Performed (BCWP)

The planned cost of work completed to date. BCWP is also the 'earned value' of work completed to date

Budgeted Cost of Work Scheduled (BCWS)

The planned cost of work that should have been achieved according to the project baseline dates

Budget Element

Budget elements are the same as resources – the people, materials, or other entities needed to do the work. Budget elements can be validated against a Resource Breakdown Structure (RBS). They are typically assigned to a work package, but can also be defined at the cost account level.

Budget Estimate

An approximate estimate prepared in the early stages of a project to establish financial viability or secure resources.

Budgeting

Time phased financial requirements.

Budget Unit

The budget unit is the base unit for the calculation. For example, the Engineer budget element might have a budget unit of hours. Since budget units are user defined, they can be any appropriate unit of measure. For example, a budget unit might be hours, pounds sterling, linear metres, or tons.

Burden

Overhead expenses distributed over appropriate direct labour and/or material base.

Business Case*

Information necessary to enable approval, authorisation and policy making bodies to assess a project proposal and reach a reasoned decision.

C**Calendars**

A project calendar lists time intervals in which activities or resources can or cannot be scheduled. A project usually has one default calendar for the normal workweek (Monday through Friday for example), but may have other calendars as well. Each calendar can be customised with its own holidays and extra work days. Resources and activities can be attached to any of the calendars that are defined.

Capital Cost*

The carrying cost in a balance sheet of acquiring an asset and bringing it to the condition where it is capable of performing its intended function over a future series of periods. Note: See also 'revenue cost'.

Capital Employed*

Amount of investment in an organisation or project, normally the sum of fixed and current assets, less current liabilities at a particular date.

Cascade Chart*

Bar chart on which the vertical order of activities is such that each activity is dependent only on activities higher in the list.

Cash Flow*

Cash receipts and payments in a specified period.

Cash Flow, Nett*

Difference between cash received and payments made during a specific period.

Champion

An end user representative, often seconded into a project team. Someone who acts as an advocate for a proposal or project.

Change Log

A record of all project changes, proposed, authorised or rejected.

Change Management

The formal process through which changes to the project plan are approved and introduced.

Change Control*

Process that ensures potential changes to the deliverables of a

project or the sequence of work in a project, are recorded, evaluated, authorised and managed.

Change Control Board

A formally constituted group of stakeholders responsible for approving or rejecting changes to the project baselines.

Change Request

A request needed to obtain formal approval for changes to the scope, design, methods, costs or planned aspects of a project. Change requests may arise through changes in the business or issues in the project. Change requests should be logged, assessed and agreed on before a change to the project can be made.

Child Activity*

Subordinate task belonging to a 'parent' task existing at a higher level in the Work Breakdown Structure.

Client

The party to a contract who commissions the work and pays for it on completion.

Close Out

The completion of work on a project.

Closure

The formal end point of a project, either because it has been completed or because it has been terminated early.

Code of Accounts

Any numbering system, usually based on corporate code of accounts of the primary performing organisation, used to monitor project costs by category.

Commissioning*

Advancement of an installation from the stage of static completion to full working order and achievement of the specified operational requirements.

Commitment

A binding financial obligation, typically in the form of a purchase order or contract.

Committed Costs*

Costs that are legally committed even if delivery has not taken place with invoices neither raised nor paid.

Communication

The transmission of information so that the recipient understands clearly what the sender intends.

Communications Planning

Determining project stakeholders' communication and information needs.

Completion Date

The date calculated by which the project could finish following careful estimating.

Compound Risk

A risk made up of a number of inter-related risks.

Conception Phase*

The phase that triggers and captures new ideas or opportunities and identifies potential candidates for further development in the feasibility phase

Concurrent Engineering

The systematic approach to the simultaneous, integrated design of products and their related processes, such as manufacturing, testing and supporting.

Configuration*

Functional and physical characteristics of a product as defined in technical documents and achieved in the product. Note: In a project this should contain all items that can be identified as being relevant to the project and that should only be modified after authorisation by the relevant manager. (Includes documentation)

Configuration Audit

A check to ensure that all deliverable items on a project conform with one another and to the current specification. It ensures that relevant quality assurance procedures have been implemented and that there is consistency throughout project documentation.

Configuration Control

A system through which changes may be made to configuration items.

Configuration Identification

Identifies uniquely all items within the configuration.

Configuration Item

A part of a configuration that has a set function and is designated for configuration management. It identifies uniquely all items within the configuration.

Configuration Management*

Technical and administrative activities concerned with the creation, maintenance and controlled change of configuration throughout the life of the product. Note: See BS EN ISO 10007 for guidance on configuration management, including specialist terminology.

Configuration Status Accounting

Records and reports the current status and history of all changes to the configuration. Provides a complete record of what happened to the configuration to date.

Conflict Management

The ability to manage conflict creatively and effectively.

Constraints

Applicable restrictions that will affect the scope of the project or the sequence of project activities.

Consumable Resource

A type of resource that only remains available until consumed (for example, a material).

Contingency

A Contingency is the planned allotment of time and cost or other resources for unforeseeable elements with a project.

Contingency Plan*

Mitigation plan. Alternative course(s) of action devised to cope with project risks. Note: See risk plan.

Contingency Planning

The development of a management plan that uses alternative strategies to minimise or negate the adverse effects of a risk, should it occur.

Contract

A mutually binding agreement in which the contractor is obligated to provide services or products and the buyer is obligated to provide payment for them. Contracts fall into three main categories: fixed price, cost reimbursable or unit price but may contain elements from each.

Contract Budget Base

The negotiated contract cost value plus the estimated value of authorised but un-priced work.

Contract Close-out

Settlement of a contract.

Contractor

A person, company or firm who holds a contract for carrying out the works and/or the supply of goods in connection with the Project.

Contract Target Cost

The negotiated costs for the original defined contract and all contractual changes that have been agreed and approved, but excluding the estimated cost of any authorised, un-priced changes. The contract target cost equals the value of

the budget at completion plus management or contingency reserve.

Contract Target Price

The negotiated estimated costs plus profit or fee.

Control

Control is the process of developing targets and plans; measuring actual performance, comparing it against planned performance and taking effective action to correct the situation.

Control Charts

Control charts display the results, over time, of a process. They are used to determine if the process is in need of adjustment.

Co-ordination

Co-ordination is the act of ensuring that work carried out by different organisations and in different places fits together effectively. It involves technical matters, time, content and cost in order to achieve the project objectives effectively.

Co-ordinated Matrix

An organisational structure where the project leader reports to the functional manager and doesn't have authority over team members from other departments.

Corrective Action

Changes made to bring future project performance back into line with the plan.

Cost Account

A cost account defines what work is to be performed, who will perform it and who is to pay for it. Cost accounts are the focal point for the integration of scope, cost, and schedule. Another term for Cost Account is Control Account.

Cost Account Manager

A member of a functional organisation responsible for cost account performance, and for the management of resources to accomplish such tasks.

Cost Benefit Analysis *

An analysis of the relationship between the costs of undertaking a task or project, initial and recurrent, and the benefits likely to arise from the changed situation, initially and recurrently. Note: The hard tangible, readily measurable benefits may sometimes be accompanied by soft benefits which may be real but difficult to isolate, measure and value. (Allows comparison of the returns from alternative forms of investment.)

Cost Breakdown Structure*

Hierarchical breakdown of a project into cost elements.

Cost Budgeting

Allocating cost estimates to individual project components.

Cost Centre*

Location, person, activity or project in respect of which costs may be ascertained and related to cost units.

Cost Code*

Unique identity for a specified element of work.

(Code assigned to activities that allow costs to be consolidated according to the elements of a code structure.)

Cost Control Point

The point within a programme at which costs are entered and controlled. Frequently, the cost control point for a project is either the cost account or the work package.

Cost Control System

Any system of keeping costs within the bounds of budgets or standards based upon work actually performed.

Cost Curve

A graph plotted against a horizontal time scale and cumulative cost vertical scale.

Cost Element

A unit of costs to perform a task or to acquire an item. The cost estimated may be a single value or a range of values.

Cost Estimating

The process of predicting the costs of a project.

Cost Incurred

Costs identified through the use of the accrued method of accounting or costs actually paid. Costs include direct labour, direct materials, and all allowable indirect costs.

Cost Management

The effective financial control of the project through evaluating, estimating, budgeting, monitoring, analysing, forecasting and reporting the cost information.

Cost Overrun

The amount by which a contractor exceeds or expects to exceed the estimated costs, and/or the final limitations (the ceiling) of a contract.

Cost Performance Index(CPI)*

A measure, expressed as a percentage or other ratio of actual cost to budget plan. (Ratio of work accomplished versus work cost incurred for a specified

time period. The CPI is an efficiency rating for work accomplished for resources expended.)

Cost Performance Report

A regular cost report to reflect cost and schedule status information for management.

Cost Plan

A budget which shows the amounts and expected dates of incurring costs on the project or on a contract.

Cost Plus Fixed Fee Contract

A type of contract where the buyer reimburses the seller for the seller's allowable costs plus a fixed fee.

Cost Plus Incentive Fee Contract (CPIFC)

A type of Contract where the buyer reimburses the seller for the seller's allowable costs and the seller earns a profit if defined criteria are met.

Cost Reimbursement Type Contracts

A category of contracts based on payments to a contractor for allowable estimated costs, normally requiring only a 'best efforts' performance standard from the contractor. Risk for all growth over the estimated value rests with the project owner.

Cost/Schedule Planning and Control Specification (C/SPCS)

The United States Air Force initiative in the mid-1960's which later resulted in the C/SCSC.

Cost – Time Resource sheet (CTR)

A document that describes each major element in the WBS, including a Statement of Work (SOW) describing the work content, resources required, the time frame of the work element and a cost estimate.

Cost Variance*

The difference (positive or negative) between the actual expenditure and the planned/budgeted expenditure.

Credited Resource*

Resource that is created by an activity or event and can then be used by the project.

Critical Activity

An activity is termed critical when it has zero or negative float.

Criticality Index

Used in risk analysis, the criticality index represents the percentage of simulation trails that resulted in the activity being placed on the critical path.

Critical Path*

Sequence of activities through a project network from start to finish, the sum of whose durations determines the overall project duration. Note: There may be more than one such path.

(The path through a series of activities, taking into account interdependencies, in which the late completion of activities will have an impact on the project end date or delay a key milestone.)

Critical Path Analysis*

Procedure for calculating the critical path and floats in a network.

Critical Path Method (CPM)

A technique used to predict project duration by analysing which sequence of activities has the least amount of scheduling flexibility. The Critical Path Method is a modelling process that defines all the project's critical activities that must be completed on time. The start and finish dates of activities in the project are calculated in two passes. The first pass calculates early start and finish dates from the earliest start date forward. The second pass calculates the late start and finish activities from the latest finish date backwards. The difference between the pairs of start and finish dates for each task is the float or slack time for the task (see Float). Slack is the amount of time a task can be delayed without delaying the project completion date. By experimenting with different logical sequences and/or durations the optimal project schedule can be determined.

Critical Performance Indicator

A critical factor against which aspects of project performance may be assessed.

Critical Success Factor

A factor considered to be most conducive to the achievement of a successful project.

Customer

Any person who defines needs or wants, justifies or pays for part or the entire project, or evaluates or uses the results. Could be the project promoter, client, owner or employer.

Cut-off Date

The ending date of a reporting period.

D

Dangle

An activity or network which has either no predecessors or no successors. If neither, it is referred to as an isolated activity.

Decision Event*

State in the progress of a project when a decision is required before the start of any succeeding activity. Note: The decision determines which of a number of alternative paths is to be followed.

Delaying Resource

In resource scheduling, inadequate availability of one or more resources may require that the completion of an activity be delayed beyond the date on which it could otherwise be completed. The delaying resource is the first resource on an activity that causes the activity to be delayed.

Delegation

The practice of getting others to perform work effectively which one chooses not to do oneself. The process by which authority and responsibility is distributed from Project Manager to subordinates.

Deliberate Decision Event*

Decision event where the decision is made as a result of the outcomes of the preceding activities and possibly other information but it cannot be made automatically.

Deliverables*

End products of a project or the measurable results of intermediate activities within the project organisation. Note: Deliverables may be in the form of hardware, software, services, processes, documents or any combination thereof.

Delphi Technique

A process where a consensus view is reached by consultation with experts. Often used as an estimating technique.

Dependency*

Precedence relationship. Restriction that one activity has to precede, either in part or in total, another activity.

(Dependencies are relationships between products or tasks. For example, one product may be made up of several other 'dependent' products or a task may not begin until a 'dependent' task is complete. See also logical relationship.)

Dependency Arrow*

A link arrow used in an activity on node network to represent the interrelationships of activities in a project.

Design Authority

The person or organisation with overall design responsibility for the products of the project.

Design and Development Phase

The time period in which production process and facility and production processes are developed and designed.

Deterministic Network*

Network containing paths, all of which have to be followed and whose durations are fixed. Note: Deterministic network is a term used to distinguish traditional networking from probabilistic networking.

Direct Costs*

Costs that are specifically attributable to an activity or group of activities without apportionment. (Direct costs are best contrasted with indirect costs that cannot be identified to a specific project.)

Discounted Cash Flow (DCF)*

Concept of relating future cash inflows and outflows over the life of a project or operation to a common base value, thereby allowing more validity to comparison of projects with different durations and rates of cash flow.

Discrete Milestone

A milestone that has a definite scheduled occurrence in time. Logical link that may require time but no other resource.

Dummy activity in activity on arrow network*

An activity representing no actual work to be done but required for reasons of logic or nomenclature. Note: There are three uses for a dummy activity in 'activity-on-arrow network'.

- a) logic,
- b) time delay and
- c) uniqueness.

Duration

Duration is the length of time needed to complete an activity.

Duration Compression

Often resulting in an increase in cost, duration compression is the shortening of a project schedule without reducing the project scope.

E**Earliest Feasible Date**

The earliest date on which the activity could be scheduled to start based on the scheduled dates of all its predecessors, but in the absence of any resource constraints on the activity itself. This date is calculated by resource scheduling.

Early Dates

Calculated in the forward pass of time analysis, early dates are the earliest dates on which an activity can start and finish.

Earliest Finish Time*

Earliest possible time by which an activity can finish within the logical and imposed constraints of the network.

(The Early Finish date is defined as the earliest calculated date on which an activity can end. It is based on the activity's Early Start which depends on the finish of predecessor activities and the activity's duration).

Early Start Time*

Earliest possible time by which an activity can start within the logical and imposed constraints of the network.

Earned Hours

The time in standard hours credited as a result of the completion of a given task or a group of tasks.

Earned Value*

The value of the useful work done at any given point in a project.

Note: The budget may be expressed in cost or labour hours.

Earned Value Analysis

Analysis of project progress where the actual money, hours (or other measure) budgeted and spent is compared to the value of the work achieved.

Earned Value Cost Control

The quantification of the overall progress of a project in financial terms so as to provide a realistic yardstick against which to compare the actual cost to date.

Earned Value Management*

Earned value analysis
Technique for assessing whether the earned value in relation to the amount of work completed, is ahead, on, or behind plan.

Effort

The number of labour units necessary to complete the work. Effort is usually expressed in staff-

hours, staff-days or staff-weeks and should not be confused with duration.

Effort-Driven Activity

An activity whose duration is governed by resource usage and availability. The resource requiring the greatest time to complete the specified amount of work on the activity will determine its duration.

Effort Remaining

The estimate of effort remaining to complete an activity.

Elapsed Time

Elapsed time is the total number of calendar days (excluding non-work days such as weekends or holidays) that is needed to complete an activity. It gives a realistic view of how long an activity is scheduled to take for completion.

End Activity

An activity with no logical successors.

End Event (of a project)*

Event with preceding, but no succeeding activities. Note: There may be more than one end event.

Environmental Factoring*

Use of data relating to an external factor (such as the weather) to modify or bias the value of parameters concerned.

Equivalent Activity*

Activity that is equivalent, in the probabilistic sense, to any combination of series and parallel activities.

Estimate

A quantified assessment of the resources required to complete part or all of a project. The prediction of the quantitative result. It is usually applied to project costs, resources and durations.

Estimate At Completion (EAC)

A value expressed in either money and/or hours, to represent the projected final costs of work when completed. The EAC is calculated as $ETC + ACWP$.

Estimate To Complete (ETC)

The value expressed in either money or hours developed to represent the cost of the work required to complete a task.

Estimating

The act of combining the results of post project reviews, metrics, consultation and informed assessment to arrive at time and resource requirements for an activity.

Event*

State in the progress of a project after the completion of all preceding activities, but before the start of any succeeding activity.

(A defined point that is the beginning or end of an activity).

Exception Report*

Focused report drawing attention to instances where planned and actual results are expected to be, or are already, significantly different. Note: An exception report is usually triggered when actual values are expected to cross a predetermined threshold that is set with reference to the project plan. The actual values may be trending better or worse than plan.

Exclusive OR Relationship*

Logical relationship indicating that only one of the possible activities can be undertaken.

Execution phase

The phase of a project in which work towards direct achievement of the project's objectives and the production of the project's deliverables occurs. Sometimes called the implementation phase.

Expenditure

A charge against available funds, evidenced by a voucher, claim, or other documents. Expenditures represent the actual payment of funds.

Exceptions

Exceptions are occurrences that cause deviation from a plan, such as issues, change requests and risks. Exceptions can also refer to items where the cost variance and schedule variance exceed predefined thresholds.

External Constraint

A constraint from outside the project network.

F**Fast -Tracking***

Reducing the duration of a project usually by overlapping phases or activities that were originally planned to be done sequentially. (The process of reducing the number of sequential relationships and replacing them typically with parallel relationships (usually to achieve shorter overall durations but often with increased risk).)

Fallback plan

A plan for an alternative course of action that can be adopted to overcome the consequences of a risk, should it occur (including carrying out any advance activities that may be required to render the plan practical).

Feasibility Phase*

The project phase that demonstrates that the client's requirement can be achieved and identifies and evaluates the options to determine the one preferred solution.

Feasibility Study*

Analysis to determine if a course of action is possible within the terms of reference of the project.

Feasible schedule*

Any schedule capable of implementation within the externally determined constraints of time and/or resource limits.

Final Report*

Post-implementation report. Normally a retrospective report that formally closes the project having handed over the project deliverables for operational use. Note: The report should draw attention to experiences that may be of benefit to future projects and may form part of the accountability of the project team.

Finish Date

The actual or estimated time associated with an activity's completion.

Finishing Activity

A finishing activity is the last activity that must be completed before a project can be considered finished. This activity is not a predecessor to any other activity – it has no successors.

Finish-To-Finish Lag

The finish-to-finish lag is the minimum amount of time that must pass between the finish of one activity and the finish of its successor(s).

Finish-To-Start Lag

The finish-to-start lag is the minimum amount of time that must pass between the finish of one activity and the start of its successor(s). The default finish-to-start lag is zero.

Firm Fixed Price Contract

A contract where the buyer pays a set amount to the seller regardless of that seller's cost to complete the contract.

Fixed Date

A calendar date (associated with a plan) that cannot be moved or changed during the schedule.

Fixed-Duration Scheduling

A scheduling method in which, regardless of the number of resources assigned to the task, the duration remains the same.

Fixed Finish

See Imposed Finish.

Fixed Price Contracts

A generic category of contracts based on the establishment of firm legal commitments to complete the required work. A performing contractor is legally obligated to finish the job, no matter how much it costs to complete. Risks of all cost growth rest on the performing contractor.

Fixed Start

See Imposed Start.

Float*

Time available for an activity or path in addition to its planned duration. (Float is the amount of time that an activity can slip past its earliest completion date without delaying the rest of the project. The calculation depends on the float type. See start float, finish float, free float, positive float, and negative float)

Forecast At Completion

Scheduled cost for a task.

Forecast Final Cost

See Estimate at Completion.

Forward Pass*

A procedure whereby the earliest event times or the earliest start and finish times for the activities of a network are calculated.

Free Float*

Time by which an activity may be delayed or extended without affecting the start of any succeeding activity. Note: Free float can never be negative.

Functional Organisation*

Management structure where specific functions of an organisation are grouped into specialist departments providing dedicated services. Note: Examples of functional organisation are finance, marketing and design departments.

Functional Specification

A document specifying in some detail the functions that are required of a system and the constraints that will apply.

Functional Manager

The person responsible for the business and technical management of a functional group.

Functional Matrix

An organisation type where the project has a team leader in each functional department and the products are passed from one team to the next.

Functional Organisation

A functional management structure where specific functions of a business are grouped into specialist departments that provide a dedicated service to the whole of the organisation e.g. accounts department, production department, drawing office.

Funding Profile

An estimate of funding requirements over time.

G**Gantt Chart***

Particular type of bar chart showing planned activity against time.

Note: 'Gantt Chart', although named for a particular type of bar chart, is in current usage as a name for bar charts in general.

(A Gantt chart is a time-phased graphic display of activity durations. Activities are listed with other tabular information on the left side with time intervals over the bars. Activity durations are shown in the form of horizontal bars.)

Goal

A one-sentence definition of specifically what will be accomplished, while incorporating an event signifying completion.

H**Hammock***

Activity, joining two specified points, that span two or more activities. Note: Its duration is initially unspecified and is only determined by the durations of the specified activities. Note: Hammocks are usually used to collect time-dependent information, e.g. overheads.

(A group of activities, milestones, or other hammocks aggregated together for analysis or reporting purposes. Sometimes used to describe an activity such as management support that has no

duration of its own but derives one from the time difference between the two points to which it is connected.)

Hand-over

The formal process of transferring responsibility for and ownership of the products of a project to the operator or owner.

Hierarchical Coding Structure

A coding system that can be represented as a multi-level tree structure in which every code except those at the top of the tree has a parent code.

Hierarchy of Networks*

Range of networks at different levels of detail, from summary down to working levels, showing the relationships between those networks.

Histogram

A graphic display of planned and or actual resource usage over a period of time. It is in the form of a vertical bar chart, the height of each bar representing the quantity of resource usage in a given time unit. Bars may be single, multiple or show stacked resources.

Holiday

An otherwise valid working day that has been designated as exempt from work.

Host Organisation*

Organisation that provides the administrative and logistical support for the project.

Hypercritical Activities

Activities on the critical path with negative float.

I**Impact**

The assessment of the adverse effects of an occurring risk.

Impact Analysis

Assessing the merits of pursuing a particular course of action.

Implementation Phase*

The project phase that develops the chosen solution into a completed deliverable. Note: Realisation is the internationally accepted and preferred term for implementation.

Imposed Date*

Point in time determined by circumstances outside the network. Note: A symbol is inserted immediately above the event concerned on activity on arrow networks or adjacent and connected

to the appropriate corner of the node on activity on node networks.

Imposed Finish

A finished date imposed on an activity by external constraints.

Imposed Start

A start date imposed on an activity by external constraints.

Inclusive OR relationship*

Logical relationship indicating that at least one but not necessarily all of the activities have to be undertaken.

INCOTERMS

A set of international terms defining conditions for delivery and shipping of equipment and materials.

Incurred Costs*

Sum of actual and committed costs, whether invoiced/paid or not, at a specified time.

Indirect Cost*

Costs associated with a project that cannot be directly attributed to an activity or group of activities. (Resources expended which are not directly identified to any specific contract, project, product or service, such as overheads and general administration.)

In-house Project

A project commissioned and carried out entirely within a single organisation.

Initiation

Committing the organisation to begin a project.

In Progress

An activity that has been started, but not yet completed.

Integrated Logistics Support*

Disciplined approach to activities necessary to

- cause support considerations to be integrated into product design
- develop support arrangements that are consistently related to design and to each other and
- provide the necessary support at the beginning and during customer use at optimum cost.

Integration

The process of bringing people, activities and other things together to perform effectively.

Internal Rate of Return (IRR)*

Discount rate at which the net present value of a future cash flow is zero. Note: IRR is a special case of the 'discounted cash flow' procedures.

Inverted Matrix

A project oriented organisation structure that employs permanent specialists to support projects.

Issue

An immediate problem requiring resolution.

J

- No Terms Defined -

K**Key Events**

Major events the achievement of which that are deemed to be critical to the execution of the project.

Key Performance Indicators (KPI)

Measurable indicators that will be used to report progress that is chosen to reflect the critical success factors of the project.

L**Labour Rate Variances**

Difference between planned labour rates and actual labour rates.

Ladder*

Device for representing a set of overlapping activities in a network diagram. Note: The start and finish of each succeeding activity are linked only to the start and finish of the preceding activity by lead and lag activities, which consume only time.

Lag*

- a) In a network diagram, the minimum necessary lapse of time between the finish of one activity and the finish of an overlapping activity
- b) delay incurred between two specified activities

Late Dates

Calculated in the backward pass of time analysis, late dates are the latest dates by which an activity can be allowed to start or finish.

Latest Event Time*

Latest time by which an event has to occur within the logical and imposed constraints of the network, without affecting the total project duration.

Late Event Date

Calculated from backward pass, it is the latest date an event can occur.

Latest Finish Time*

The latest possible time by which an activity has to finish within the

logical activity and imposed constraints of the network, without affecting the total project duration.

Latest Start Time*

Latest possible time by which an activity has to start within the logical and imposed constraints of the network, without affecting the total project duration.

Lead*

In a network diagram, the minimum necessary lapse of time between the start of one activity and the start of an overlapping activity.

Lead Contractor

The contractor who has responsibility for overall project management and quality assurance

Leadership

Getting others to follow.

Letter of Intent

A letter indicating an intent to sign a contract, usually so that work can commence prior to signing that contract.

Levelling

See Resource Levelling.

Life Cycle

A sequence of defined stages over the full duration of a project.

Life-Cycle Costing

When evaluating alternatives, Life-Cycle Costing is the concept of including acquisition, operating and disposal costs.

Likelihood

Assessment of the probability that a risk will occur.

Line Manager

The manager of any group that makes a product or performs a service.

Linked Bar Chart

A bar chart that shows the dependency links between activities.

Logic

See Network Logic.

Logic Diagram

A diagram that displays the logical relationships between project activities.

Logical Relationship

A logical relationship is based on the dependency between two project activities or between a project activity and a milestone.

Loop*

An error in a network which results in a later activity imposing a logical restraint on an earlier activity.

M**Management by Project**

A term used to describe normal management processes that are being project managed.

Management Development

All aspects of staff planning, recruitment, development, training and assessment.

Management Reserve*

A central contingency pool. Sum of money held as an overall contingency to cover the cost impact of some unexpected event occurring. Note: This is self-insurance.

Master Network*

Network showing the complete project, from which more detailed networks are derived.

Master Schedule

A high level summary project schedule that identifies major activities and milestones.

Material

Property which may be incorporated into or attached to an end item to be delivered under a contract or which may be consumed or expended in the performance of a contract. It includes, but is not limited to raw and processed material, parts, components, assemblies, fuels and lubricants, and small tools and supplies which may be consumed in normal use in the performance of a contract.

Matrix Organisation

An organisational structure where the Project Manager and the Functional Managers share the responsibility of assigning priorities and for directing the work.

Methodology

A documented process for management of projects that contains procedures, definitions and roles and responsibilities.

Mid-Stage Assessment

An assessment in the middle of a project that can be held for several reasons: 1) at the request of the project board; 2) to authorise work on the next stage before current one is completed; 3) to allow for a formal review in the middle of a long project; or 4) to review exception plans.

Milestone*

A key event. An event selected for its importance in the project. Note: Milestones are commonly used in

relation to progress.
(A milestone is often chosen to represent the start of a new phase or completion of a major deliverable. They are used to monitor progress at summary level. Milestones are activities of zero duration.)

Milestone Plan

A plan containing only milestones which highlight key points of the project.

Milestone Schedule

A schedule that identifies the major milestones. See also Master Schedule.

Mission Statement

Brief summary, approximately one or two sentences, that sums up the background, purposes and benefits of the project.

Mitigation

Working to reduce risk by lowering its chances of occurring or by reducing its effect if it occurs.

Mobilisation

The bringing together of project personnel and securing equipment and facilities. Carried out during project start-up phases.

Monitoring

Monitoring is the recording, analysing and reporting of project performance as compared to the plan.

Monte Carlo Simulation

A technique used to estimate the likely range of outcomes from a complex process by simulating the process under randomly selected conditions a large number of times.

Multi-Project

A project consisting of multiple subprojects.

Multi-Project Analysis

Multi-project analysis is used to analyse the impact and interaction of activities and resources whose progress affects the progress of a group of projects or for projects with shared resources or both. Multi-project analysis can also be used for composite reporting on projects having no dependencies or resources in common.

Multi-Project Management

Managing multiple projects that are interconnected either logically or by shared resources.

Multi-project Scheduling*

Use of the techniques of resource allocation to schedule more than one project concurrently.

N

Near-Critical Activity

A low total float activity.

Negative Total Float*

Time by which the duration of an activity or path has to be reduced in order to permit a limiting imposed date to be achieved.

Negotiated Contract Cost

The estimated cost negotiated in a Cost-Plus-Fixed-Fee Contract or the negotiated contract target cost in either a Fixed Price-Incentive Contract or a Cost-Plus-Incentive-Fee Contract. See also Contract Target Cost.

Negotiation

The art of satisfying needs by reaching agreement or compromise with other parties.

Net Present Value* (NPV)

Aggregate of future net cash flows discounted back to a common base date, usually the present.

Network

A pictorial presentation of project data in which the project logic is the main determinant of the placements of the activities in the drawing. Frequently called a flowchart, PERT chart, logic drawing, or logic diagram.

Network Analysis*

Method used for calculating a project's critical path and activity times and floats. Note: See also critical path analysis, project network techniques.

Network Interface*

Activity or event common to two or more network diagrams.

Network Logic

The collection of activity dependencies that make up a project network.

Network Path

A series of connected activities in a project network.

Nodes*

Points in a network at which arrows start and finish.

Non-recurring Costs

Expenditures against specific tasks that are expected to occur only once on a given project.

Non-splittable Activity*

An activity that, once started, has to be completed to plan without interruption. Note: Resources should not be diverted from a non-splittable activity to another activity.

Not Earlier Than

A restriction on an activity that indicates that it may not start or end earlier than a specified date.

Not Later Than

A restriction on an activity that indicates that it may not start or end later than a specified date.

O

Objectives

Predetermined results toward which effort is directed.

Operation Phase*

Period when the completed deliverable is used and maintained in service for its intended purpose.

Opportunity

The opposite of a risk. The chance to enhance the project benefits.

Order of Magnitude Estimate

An estimate carried out to give very approximate indication of likely out-turn costs.

Organisation Design

The design of the most appropriate organisational design for a project.

Organisational Breakdown Structure (OBS)*

Hierarchical way in which the organisation may be divided into management levels and groups, for planning and control purposes.

Organisational Planning

The process of identifying, assigning and documenting project responsibilities and relationships.

Original Budget

The initial budget established at or near the time a contract was signed or a project authorised, based on the negotiated contract cost or management's authorisation.

Original Duration

The duration of activities or groups of activities as recorded in the Baseline Schedule.

Other Direct Costs (ODC)

A group of accounting elements which can be isolated to specific tasks, other than labour and material. Included in ODC are such items as travel, computer time, and services.

Out-of-Sequence Progress

Progress that has been reported even though activities that have been deemed predecessors in project logic have not been completed.

Output Format

Information that governs the final

appearance of a report or drawing. (Usually refers to computer-generated documents)

Outsourcing*

Contracting-out, buying in facilities or work (as opposed to using in-house resources).

Overall Change Control

Co-ordinating and controlling changes across an entire project.

Overhead

Costs incurred in the operation of a business that cannot be directly related to the individual products or services being produced. See also 'Indirect Cost.'

Overrun

Costs incurred in excess of the contract target costs on an incentive type contract or the estimated costs on a fixed fee contract. An overrun is that value of costs which are needed to complete a project, over that value originally authorised by management.

P

Parallel Activities

Parallel activities are two or more activities than can be done at the same time. This allows a project to be completed faster than if the activities were arranged serially.

Parent Activity*

Task within the work breakdown structure that embodies several subordinate 'child' tasks.

Parties (to a contract)

The persons or companies who sign a contract with one another.

Path*

Activity or an unbroken sequence of activities in a project network. (Refer to critical path method for information on critical and non-critical paths.)

Percent Complete

A measure of the completion status of a partially completed activity. May be aggregated to sections of a project or the whole project.

Performance Measurement Techniques

Performance measurement techniques are the methods used to estimate earned value. Different methods are appropriate to different work packages, either due to the nature of the work or to the planned duration of the work package.

Performance Specification*

Statement of the totality of needs expressed by the benefits, features, characteristics, process conditions, boundaries and constraints that together define the expected performance of a deliverable.

Note: A performance specification should provide for innovation and alternative solutions, by not defining or unduly constraining the technical attributes of the intended deliverable.

Performing

A team building stage where the emphasis is on the work currently being performed.

Phase (of a project)*

That part of a project during which a set of related and interlinked activities are performed. Note: A project consists of a series of phases that together constitute the whole project life cycle.

Physical Percent Complete

The percentage of the work content of an activity that has been achieved.

Pilot

A form of testing a new development and its implementation prior to committing to its full release.

Plan

A plan is an intended future course of action. It is owned by the project manager, it is the basis of the project controls and includes the 'what', the 'how', the 'when', and the 'who'.

Planned Activity

An activity not yet started.

Planned Cost*

Estimated cost of achieving a specified objective.

Planning

The process of identifying the means, resources and actions necessary to accomplish an objective.

Planning Stage

The stage prior to the implementation stage when product activity, resource and quality plans are produced.

Planner

A member of a project team or project support office with the responsibility for planning, scheduling and tracking of projects. They are often primarily concerned with schedule, progress and manpower resources.

Portfolio

A grouping or bundle of projects, collected together for management

convenience. They may or may not have a common objective, they are often related only by the use of common resources.

Portfolio Management

The management of a number of projects that do not share a common objective.

Positive Float

Positive float is defined as the amount of time that an activity's start can be delayed without affecting the project completion date. An activity with positive float is not on the critical path and is called a non-critical activity. The difference between early and late dates (start or finish) determines the amount of float.

Post Implementation Review

A review between 6–12 months after a system in a project has met its objectives to verify that it continues to meet user requirements.

Post Project Appraisal

An evaluation that provides feedback in order to learn for the future.

Precedence Diagram Method

One of the two methods of representing project as networks, in which the activities are represented by nodes and the relationships between them by arrows.

Precedence Network*

A multiple dependency network. An activity-on-node network in which a sequence arrow represents one of four forms of precedence relationship, depending on the positioning of the head and the tail of the sequence arrow. The relationships are:

- a) Start of activity depends on finish of preceding activity, either immediately or after a lapse of time
- b) Finish of activity depends on finish of preceding activity, either immediately or after a lapse of time
- c) Start of activity depends on start of preceding activity, either immediately or after a lapse of time
- d) Finish of activity depends on start of preceding activity, either immediately or after a lapse of time.

Preceding Event*

In an activity-on-arrow network, an event at the beginning of an activity.

Pre-commissioning

That work which is carried out prior to commissioning in order to demonstrate that commissioning may be safely undertaken.

Predecessor

An activity that must be completed (or be partially completed) before a specified activity can begin.

Predecessor Activity

In the precedence diagramming method this is an activity which logically precedes the current activity.

Prime or Lead Contractor

A main supplier who has a contract for much or all of the work on a contract.

Probabilistic Network*

Network containing alternative paths with which probabilities are associated.

Probability

Likelihood of a risk occurring.

Process*

Set of interrelated resources and activities which transform inputs into outputs.

Procurement

The securing of goods or services.

Procurement Planning

Determining what to procure and when.

Product Breakdown Structure

A hierarchy of deliverable products which are required to be produced on the project. It forms the base document from which the execution strategy and product-based work breakdown structure may be derived. It provides a guide for Configuration Control documentation.

Product Description

The description of the purpose form and components of a product. It should always be used as a basis for acceptance of the product by the customer.

Product Flow Diagram

Represents how the products are produced by identifying their derivation and the dependencies between them.

Programme

A broad effort encompassing a number of projects and/or functional activities with a common purpose.

Programme Benefits Review

A review to assess if targets have

been reached and to measure the performance levels in the resulting business operations.

Programme Director

The senior manager with the responsibility for the overall success of the programme.

Programme Directorate

A committee that directs the programme when circumstances arise where there is no individual to direct the programme.

Programme Evaluation and Review Technique (PERT)

PERT is a project management technique for determining how much time a project needs before it is completed. Each activity is assigned a best, worst, and most probable completion time estimate. These estimates are used to determine the average completion time. The average times are used to calculate the critical path and the standard deviation of completion times for the entire project.

Programme Management

The effective management of several individual but related projects or functional activities in order to produce an overall system that works effectively.

Programme Management Office

The office responsible for the business and technical management of a specific contract or programme.

Programme Manager*

Individual or body with responsibility for managing a group of projects.

Programme Support Office

A group that gives administrative support to the programme manager and the programme executive.

Progress

The partial completion of a project, or a measure of the same.

Progress Payments

Payments made to a contractor during the life of a fixed-price type contract, on the basis of some agreed-to formula, for example, Budget Cost of Work Performed or simply costs incurred.

Progress Report

A regular report to senior personnel, sponsors or stakeholders summarising the progress of a project including key events, milestones, costs and other issues.

Project*

Unique set of co-ordinated

activities, with definite starting and finishing points, undertaken by an individual or organisation to meet specific objectives within defined time, cost and performance parameters. (See also BS ISO 10006.) (Alternative definition: An endeavour in which human, material and financial resources are organised in a novel way to deliver a unique scope of work of given specification, often within constraints of cost and time, and to achieve beneficial change defined by quantitative and qualitative objectives.)

Project Appraisal

The discipline of calculating the viability of a project.

Project Base Date*

Reference date used as a basis for the start of a project calendar.

Project Board

A project board is the body to which the Project Manager is accountable for achieving the project objectives.

Project Brief*

Statement that describes the purpose, cost, time and performance requirements/constraints for a project.

(A statement of reference terms for a project. A written statement of the Client's goals and requirements in relation to the project.)

Project Calendar

A calendar that defines global project working and non-working periods.

Project Co-ordination*

Communication linking various areas of a project to ensure the transfer of information or hardware at interface points at the appropriate times and identification of any further necessary resources.

Project Co-ordination Procedure

Defines the parties relevant to the project and the approved means of communicating between them.

Project Champion*

Person within the parent organisation who promotes and defends a project.

Project Closure*

Formal termination of a project at any point during its life.

Project Cost Management

A subset of project management that includes resource planning, cost estimating, cost control and cost budgeting in an effort to complete the project within its approved budget.

Project Culture

The general attitude toward projects within the business.

Project Definition

A report that defines a project i.e. why it is required, what will be done, how when and where it will be delivered, the organisation and resources required, the standards and procedures to be followed.

Project Director

The manager of a very large project that demands senior level responsibility or the person at the board level in an organisation who has the overall responsibility for projects management.

Project Environment

The project environment is the context within which the project is formulated, assessed and realised. This includes all external factors that have an impact on the project.

Project Evaluation

A documented review of the project's performance, produced at project closure. It ensures that the experience of the project is recorded for the benefit of others.

Project File

A file containing the overall plans of a project and any other important documents.

Project Initiation

The beginning of a project at which point certain management activities are required to ensure that the project is established with clear reference terms and adequate management structure.

Project Initiation Document

A document approved by the project board at project initiation that defines the terms of reference for the project.

Project Issue Report

A report that raises either technical or managerial issues in a project.

Project Life-Cycle*

All phases or stages between a project's conception and its termination. Note: The project life cycle may include the operation and disposal of project deliverables. This is usually known as an 'extended life cycle'.

Project Life Cycle Cost*

Cumulative cost of a project over its whole life cycle.

Project Log*

A project diary. A chronological

record of significant occurrences throughout the project.

Project Logic

The relationships between the various activities in a project.

Project Logic Drawing

A representation of the logical relationships of a project.

Project Management*

Planning, monitoring and control of all aspects of a project and the motivation of all those involved in it to achieve the project objectives on time and to the specified cost, quality and performance. (Alternative definition: The controlled implementation of defined change.)

Project Management Body of Knowledge

This is an inclusive term that describes the sum of knowledge within the profession of project management. As with other professions, such as law and medicine, the body of knowledge rests with the practitioners and academics that apply and advance it.

Project Management Plan*

A plan for carrying out a project, to meet specific objectives, that is prepared by or for the project manager.

Project Management Software

Computer application software designed to help with planning and controlling resources, costs and schedules of a project. It may also provide facilities for documentation management, risk analysis etc.

Project Management Team

Members of the project team who are directly involved in its management.

Project Manager*

Individual or body with authority, accountability and responsibility for managing a project to achieve specific objectives.

Project Matrix

An organisation matrix that is project based in which the functional structures are duplicated in each project.

Project Monitoring*

Comparison of current project status with what was planned to be done to identify and report any deviations.

Project Network*

Representation of activities and/or events with their inter-relationships and dependencies.

Project Network Techniques*

Group of techniques that, for the description, analysis, planning and control of projects, considers the logical inter relationships of all project activities. The group includes techniques concerned with time, resources, costs and other influencing factors, e.g. uncertainty. Note: The terms 'program evaluation and review technique' (PERT) 'critical path analysis' (CPA), 'critical path method' (CPM) and 'precedence method' refer to particular techniques and should not be used as synonyms for project network.

Project Organisation*

Structure that is created or evolves to serve the project and its participants. (A term which refers to the structure, roles and responsibilities of the project team and its interfaces to the outside world.)

Project Phase

A group of related project activities that come together with the completion of a deliverable.

Project Plan

A document for management purposes that gives the basics of a project in terms of its objectives, justification, and how the objectives are to be achieved. This document is used as a record of decisions and a means of communication among stakeholders. It gives the supporting detail to the project definition which details the schedule, resource and costs for the project.

Project Planning

Developing and maintaining a project plan.

Project Portfolio

The constituent projects within a programme.

Project Procedures Manual

A collected set of the management and administrative procedures needed for the project.

Project Procurement Management

A subset of project management that includes procurement planning, source selection, enquiry, tender assessment, placement of purchase orders and contracts for goods and services, contract and purchase order administration and close-out in an effort to obtain goods and services from outside organisations.

Project Progress Report*

Formal statement that compares the project progress, achievements and expectations with the project plan.

Project Quality Management

A subset of project management that includes quality planning, quality assurance and quality control to satisfy the needs and purpose of the project.

Project Review Calendar*

Calendar of project review dates, meetings and issues of reports set against project week numbers or dates.

Project Risk Management

A subset of project management that includes risk identification, risk quantification, risk response development and risk response control in an effort to identify, analyse and respond to project risks.

Project Schedule*

Project programme (Planned dates for starting and completing activities and milestones.)

Project Scope Management

A subset of project management that includes initiation, scope planning, scope definition, scope verification and scope change control in an effort to ensure that the project has all of the necessary work required to complete it.

Project Sponsor

- (1) The individual or body for whom the project is undertaken, the primary risk taker
- (2) The individual representing the sponsoring body and to whom the project manager reports
- (3) A person or organisation providing funds for the project.

Project Start-up

The creation of the project team.

Project Status Report

A report on the status of accomplishments and any variances to spending and schedule plans.

Project Strategy

A comprehensive definition of how a project will be developed and managed.

Project Success/Failure Criteria

The criteria by which the success or failure of a project may be judged.

Project Support Office

The central location of planning and project support functions. Often provides personnel and facilities for centralised planning, cost

management, estimating, documentation control and sometimes procurement to a number of projects.

Project Team*

Set of individuals, groups and/or organisations that are responsible to the project manager for undertaking project tasks. (Includes all contractors and consultants.)

Project Technical Plan

A plan produced at the beginning of a project that addresses technical issues and strategic issues related to quality control and configuration management.

Project Time Management

A subset of project management that includes activity definition, activity sequencing, activity duration estimating, schedule development and schedule control in order to complete the project on time.

Public Relations

An activity meant to improve the project organisation's environment in order to improve project performance and reception.

Q**Qualitative Risk Analysis**

A generic term for subjective methods of assessing risks.

Quality

A trait or characteristic used to measure the degree of excellence of a product or service. Meeting customer's needs.

Quality Assurance (QA)

The process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards.

Quality Assurance Plan

A plan that guarantees a quality approach and conformance to all customer requirements for all activities in a project.

Quality Audit

An official examination to determine whether practices conform to specified standards or a critical analysis of whether a deliverable meets quality criteria.

Quality Control (QC)

The process of monitoring specific project results to determine if they comply with relevant standards and

identifying ways to eliminate causes of unsatisfactory performance.

Quality Criteria

The characteristics of a product that determines whether it meets certain requirements.

Quality Guide

The quality guide describes quality and configuration management procedures and is aimed at people directly involved with quality reviews, configuration management and technical exceptions.

Quality Plan (for a project)*

That part of the project plan that concerns quality management and quality assurance strategies (see also ISO 10006).

Quality Planning

Determining which quality standards are necessary and how to apply them.

Quality Review

A review of a product against an established set of quality criteria.

R**Recurring Costs**

Expenditures against specific tasks that would occur on a repetitive basis. Examples are hire of computer equipment, tool maintenance, etc.

Relationship

A logical connection between two activities.

Remaining Duration

Time needed to complete the remainder of an activity or project.

Request for Change

A proposal by the project manager for a change to the project as a result of a project issue report.

Request for Proposal

A bid document used to request proposals from prospective sellers of products or services.

Request for Quotation

Equivalent to a Request for Proposal but with more specific application areas.

Requirements

A negotiated set of measurable customer wants and needs.

Requirements Definition*

Statement of the needs that a project has to satisfy.

Resource*

Any variable capable of definition that is required for the completion

of an activity and may constrain the project. Note 1: A resource may be non-storable so that its availability has to be renewed for each time period (even if it was not utilised in previous time periods). Note 2: A resource may be storable so that it remains available unless depleted by usage. Such a resource may also be replenished by activities producing credited and storable resource. (Resources can be people, equipment, facilities, funding or anything else needed to perform the work of a project.)

Resource Aggregation*

Summation of the requirements for each resource, and for each time period. Note: Where the earliest start time of an activity is used alone, it is often termed an 'early start' aggregation. Similarly a 'late start' aggregation uses the latest start times.

Resource Allocation*

Scheduling of activities and the resources required by those activities, so that predetermined constraints of resource availability and/or project time are not exceeded.

Resource Analysis

The process of analysing and optimising the use of resources on a project. Often uses resource levelling and resource smoothing techniques.

Resource Assignment

The work on an activity related to a specific resource.

Resource Availability

The level of availability of a resource, which may vary over time.

Resource Breakdown Structure

A hierarchical structure of resources that enables scheduling at the detailed requirements level, and roll up of both requirements and availabilities to a higher level.

Resource Calendar

A calendar that defines the working and non-working patterns for specific resources.

Resource Constraint*

Limitation due to the availability of a resource.

Resource Cumulation*

Process of accumulating the requirements for each resource to give the total required to date at all times throughout the project.

Resource Driven Task Durations

Task durations that are driven by the need for scarce resources.

Resource Histogram

A view of project data in which resource requirements, usage, and availability are shown using vertical bars against a horizontal time scale.

Resource Level

A specified level of resource units required by an activity per time unit.

Resource Levelling

See resource limited scheduling.

Resource Limited Scheduling*

Scheduling of activities, so that predetermined resource levels are never exceeded. Note: This may cause the minimum overall or specified project duration to be exceeded.

Resource Optimisation

A term for resource levelling and resource smoothing.

Resource Plan

Part of the definition statement stating how the programme will be resource loaded and what supporting services, infrastructure and third party services are required.

Resource Planning

Evaluating what resources are needed to complete a project and determining the quantity needed.

Resource Requirement

The requirement for a particular resource by a particular activity.

Resource Scheduling

The process of determining dates on which activities should be performed in order to smooth the demand for resources, or to avoid exceeding stated constraints on these restraints.

Resource Smoothing*

Scheduling of activities, within the limits of their float, so that fluctuations in individual resource requirements are minimised. (In smoothing, as opposed to resource levelling, the project completion date may not be delayed.

Responsibility Matrix

A document correlating the work required by a Work Breakdown Structure element to the functional organisations responsible for accomplishing the assigned tasks.

Responsible Organisation

A defined unit within the organisation structure which is assigned responsibility for accomplishing specific tasks, or cost accounts.

Retention

A part of payment withheld until the project is completed in order to

ensure satisfactory performance or completion of contract terms.

Revenue Cost*

Expenditure charged to the profit and loss account as incurred or accrued due.

Risk*

Combination of the probability or frequency of occurrence of a defined threat or opportunity and the magnitude of the consequences of the occurrence. Note: Combination of the likelihood of occurrence of a specified event and its consequences. (Potential occurrences or threats that would jeopardise the success of a project. The probability of an undesirable outcome.)

Risk Analysis*

Systematic use of available information to determine how often specified events may occur and the magnitude of their likely consequences. (A technique designed to quantify the impact of uncertainty.)

Risk Assessment

The process of identifying potential risks, quantifying their likelihood of occurrence and assessing their likely impact on the project.

Risk Avoidance

Planning activities to avoid risks that have been identified.

Risk Event

A discrete occurrence that effects a project.

Risk Evaluation*

Process used to determine risk management priorities.

Risk Identification*

Process of determining what could pose a risk.

Risk Management*

Systematic application of policies, procedures, methods and practices to the tasks of identifying, analysing, evaluating, treating and monitoring risk.

(The process whereby decisions are made to accept known or assessed risks and/or the implementation of actions to reduce the consequences or probability of occurrence.)

Risk Management Plan

A document defining how Project Risk Analysis and Management is to be implemented in the context of a particular project.

Risk Matrix

A matrix with risks located in rows,

and with impact and likelihood in columns.

Risk Prioritising

Ordering of risks according first to their risk value, and then by which risks need to be considered for risk reduction, risk avoidance, and risk transfer.

Risk Quantification*

Process of applying values to the various aspects of a risk. (Evaluating the probability of risk event effect and occurrence.)

Risk Ranking

Allocating a classification to the impact and likelihood of a risk.

Risk Reduction

Action taken to reduce the likelihood and impact of a risk.

Risk Register*

Formal record of identified risks. (A body of information listing all the risks identified for the project, explaining the nature of each risk and recording information relevant to its assessment and management.)

Risk Response*

Contingency plans to manage a risk should it materialise. (Action to reduce the probability of the risk arising, or to reduce the significance of its detrimental impact if it does arise.)

Risk, Secondary*

Risk that can occur as a result of treating a risk.

Risk Sharing*

Diminution of a risk by sharing it with others, usually for some consideration.

Risk Transfer

A contractual arrangement between two parties for delivery and acceptance of a product where the liability for the costs of a risk is transferred from one party to the other.

Risk Treatment*

Selection and implementation of appropriate options for dealing with risk.

S

Safety Plan

The standards and methods which minimise to an acceptable level the likelihood of accident or damage to people or equipment.

Schedule

A Schedule is the timetable for a

project. It shows how project tasks and milestones are planned out over a period of time.

Schedule Control

Controlling schedule changes.

Schedule Dates

Start and finish dates calculated with regard to resource or external constraints as well as project logic.

Schedule Performance Index (SPI)

Ratio of work accomplished versus work planned, for a specified time period. The SPI is an efficiency rating for work accomplishment, comparing work accomplished to what should have been accomplished.

Schedule Variance (cost)

The difference between the budgeted cost of work performed and the budgeted cost of work scheduled at any point in time.

Scheduled Finish

The earliest date on which an activity can finish, having regard to resource or external constraints as well as project logic.

Scheduled Start

The earliest date on which an activity can start, having regard to resource or external constraints as well as project logic.

Scheduling

Scheduling is the process of determining when project activities will take place depending on defined durations and precedent activities. Schedule constraints specify when an activity should start or end based on duration, predecessors, external predecessor relationships, resource availability, or target dates.

Scope

The scope is the sum of work content of a project.

Scope Change

Any change in a project scope that requires a change in the project's cost or schedule.

Scope Change Control

Controlling changes to the scope.

Scope Verification

Ensuring all identified project deliverables have been completed satisfactorily.

Scope of Work

A description of the work to be accomplished or resources to be supplied.

Secondary Risk

The risk that may occur as a result of invoking a risk response or fallback plan.

Secondment Matrix

An organisational structure whereby team members are seconded from their respective departments to the project and are responsible to the project manager.

S-Curve

A display of cumulative costs, labour hours or other quantities plotted against time.

Sequence

Sequence is the order in which activities will occur with respect to one another.

Slack*

Calculated time span within which an event has to occur within the logical and imposed constraints of the network, without affecting the total project duration. Note 1: It may be made negative by an imposed date. Note 2: The term slack is used as referring only to an event.

Slip Chart

A pictorial representation of the predicted completion dates of milestones (also referred to as Trend Chart).

Slippage

The amount of slack or float time used up by the current activity due to a delayed start or increased duration.

Soft Project

A project that is intended to bring about change and does not have a physical end product.

Soft Skills

Soft skills include team building, conflict management and negotiation.

Source Selection

Choosing from potential contractors.

Splittable Activity*

Activity that can be interrupted in order to allow its resources to be transferred temporarily to another activity.

Sponsor*

Individual or body for whom the project is undertaken and who is the primary risk taker.

Stage

A natural high level subsection of a project that has its own organisational structure, life span and manager.

Stage Payment*

Payment part way through a project at some predetermined milestone.

Stakeholder*

A person or group of people who have a vested interest in the success of an organisation and the environment in which the organisation operates. (Project stakeholders are people or organisations who have a vested interest in the environment, performance and/or outcome of the project.)

Start Event of a Project*

Event with succeeding, but no preceding activities. Note: There may be more than one start event.

Start-To-Start Lag

Start-to-start lag is the minimum amount of time that must pass between the start of one activity and the start of its successor(s). This may be expressed in terms of duration or percentage.

Starting Activity

A starting activity has no predecessors. It does not have to wait for any other activity to start.

Statement of Work*

A document stating the requirements for a given project task.

Status Reports

Written reports given to both the project team and to a responsible person on a regular basis stating the status of an activity, work package, or whole project. Status Reports should be used to control the project and to keep management informed of project status.

Steering Group

A body established to monitor the project and give guidance to the project sponsor or project manager.

Subcontract

A contractual document which legally transfers the responsibility and effort of providing goods, services, data, or other hardware, from one firm to another.

Subcontractor

An organisation that supplies goods or services to a supplier.

Subnet or Subnetwork

A division of a project network diagram representing a subproject.

Subproject

A group activities represented as a single activity in a higher level of the same.

Success Criteria

Criteria to be used for judging if the project is successful.

Success factors

Critical factors that will ensure achievement of success criteria.

Successor

A successor is an activity whose start or finish depends on the start or finish of a predecessor activity.

Sunk Costs

Unavoidable costs (even if the project were to be terminated).

Super-Critical Activity

An activity that is behind schedule is considered to be super-critical. If it has been delayed to a point where its float is calculated to be a negative value.

Supplier

Includes contractors, consultants and any organisation that supplies services or goods to the customer.

System

The complete technical output of the project including technical products.

Systems and Procedures

Systems and procedure detail the standard methods, practices and procedures of handling frequently occurring events within the project.

Systems Management

Management that includes the prime activities of systems analysis, systems design and engineering and systems development.

T**Target Completion Date**

A date which contractors strive toward for completion of the activity.

Target Date

Date imposed on an activity or project by the user. There are two types of target dates; target start dates, and target finish dates.

Target Finish – Activity

Target Finish is the user's imposed finish date for an activity. A Target Finish date is used if there are pre-defined commitment dates.

Target Finish Date

The date planned to finish work on an activity.

Target Finish – Project

A user's Target Finish date can be imposed on a project as a whole. A Target Finish date is used if there is a pre-defined completion date.

Target Start – Activity

Target Start is an imposed starting date on an activity.

Target Start Date

The date planned to start work on an activity.

Task

The smallest indivisible part of an activity when it is broken down to a level best understood and performed by a specific person or organisation.

Team

A team is made up of two or more people working interdependently toward a common goal and a shared reward.

Team Building

The ability to gather the right people to join a project team and get them working together for the benefit of a project.

Team Development

Developing skills, as a group and individually, that enhance project performance.

Team Leader

Person responsible for leading a team.

Technical Assurance

The monitoring of the technical integrity of products.

Technical Guide

A document that guides managers, team leaders and technical assurance co-ordinators on planning the production of products.

Technical Products

Products produced by a project for an end user.

Tender

A document proposing to meet a specification in a certain way and at a stated price (or on a particular financial basis), an offer of price and conditions under which the tenderer is willing to undertake work for the client.

Termination*

Completion of the project, either upon formal acceptance of its deliverables by the client and/or the disposal of such deliverables at the end of their life.

Terms of reference

A specification of a team member's responsibilities and authorities within the project.

Tied Activities*

Activities that have to be performed sequentially or within a predetermined time of each other.

Time Analysis

The process of calculating the early and late dates for each activity on a project, based on the duration of the activities and the logical relations between them.

Time Based Network*

A linked bar chart, a bar chart that shows the logical and time relationships between activities.

Time Limited Scheduling*

Scheduling of activities, so that the specified project duration, or any imposed dates are not exceeded. Note: This may cause the envisaged resource levels to be exceeded.

Time-Limited Resource Scheduling

The production of scheduled dates in which resource constraints may be relaxed in order to avoid any delay in project completion.

Time Now*

Specified date from which the forward analysis is deemed to commence.

(The date to which current progress is reported. Sometimes referred to as the status date because all progress information entered for a project should be correct as of this date.)

Time Recording

The recording of effort expended on each activity in order to update a project plan.

Time-Scaled Logic Drawing

A drawing that displays the logical connection between activities in the context of a time scale in which each horizontal position represents a point in time.

Time-Scaled Network Diagram

A project network diagram drawn so that the positioning of the activity represents schedule.

Time Sheet

A means of recording the actual effort expended against project and non-project activities.

Top Down Cost Estimating

The total project cost is estimated based on historical costs and other project variables and then subdivided down to individual activities.

Total Float*

Time by which an activity may be delayed or extended without affecting the total project duration (or violating a target finish date.)

Total Quality Management (TQM)

A strategic, integrated management systems for customer satisfaction that guides all employees in every aspect of their work.

Transit Time*

Dependency link that requires time and no other resources. It may be a negative time.

Turnaround Report

A report created especially for the various responsible managers to enter their progress status against a list of activities that are scheduled to be in progress during a particular time window.

U**Unlimited Schedule***

Infinite schedule, schedule produced without resource constraint.

Users

The group of people who are intended to benefit from the project

V**Value**

A standard, principle or quality considered worthwhile or desirable.

Value Management

A structured means of improving business effectiveness that includes the use of management techniques such as value engineering and value analysis.

Value Engineering

A technique for analysing qualitative and quantitative costs and benefits of component parts of a proposed system.

Value planning

A technique for assessing, before significant investment is made, the desirability of a proposal based on the value that will accrue to the organisation from that proposal.

Variance

A discrepancy between the actual and planned performance on a project, either in terms of schedule or cost.

Variance at Completion

The difference between Budget at Complete and Estimate at Complete.

Variation

A change in scope or timing of work which a supplier is obliged to do under a contract.

Variation Order

The document authorising an approved technical change or variation.

W**What-If Analysis**

The process of evaluating alternative strategies.

What-if Simulation*

Changing the value of the parameters of the project network to study its behaviour under various conditions of its operation.

Work

The total number of hours, people or effort required to complete a task.

Work Breakdown Code

A code that represents the 'family tree' of an element in a work breakdown structure.

Work Breakdown Structure*

Way in which a project may be divided by level into discrete groups for programming, cost planning and control purposes. Note: see also 'work package'.

(The WBS is a tool for defining the hierarchical breakdown of work required to deliver the products of a project. Major categories are broken down into smaller components. These are sub-divided until the lowest required level of detail is established. The lowest units of the WBS become the activities in a project. The WBS defines the total work to be undertaken on the project and provides a structure for all project control systems.)

Work Load

Work load is the amount of work units assigned to a resource over a period of time.

Work Package*

A group of related tasks that are defined at the same level within a work breakdown structure.

(In traditional cost/schedule systems, the criteria for defining work packages is as follows:

- 1) Each work package is clearly distinguishable from all other work packages in the programme.
- 2) Each work package has a scheduled start and finish date.
- 3) Each work package has an assigned budget that is time-phased over the duration of the work package.
- 4) Each work package either has a

relatively short duration, or can be divided into a series of milestones whose status can be objectively measured.

5) Each work package has a schedule that is integrated with higher-level schedules.)

Work Units

Work units provide the

measurement units for resources.

For example, people as a resource can be measured by the number of hours they work.

X

- No Terms Defined -

Y

- No Terms Defined -

Z

Zero Float

Zero float is a condition where there is no excess time between activities.

An activity with zero float is considered a critical activity.

Appendix 2

APMP Syllabus – Index of References

Index Item	Author	Title/Sub-title	Ref/page no.
AH	Hamilton A	Management by Projects – Achieving success in a Changing World Thomas Telford Services Ltd, 1997	ISBN 0 7277 2632 3
AH1		The Project Management Process	Part 3 Section 1 – pp 64–81
AH2		Conception and Definition Phases	Part 6 – pp 229 – 289
AH3		Quality and its Documentation	Part 8 Section 4 – pp 385–397
AH4		Creating the Project Plan	Part 7 Section 1 – pp 292–303
AH5		Earned Value	Part 8 Section 2 – pp 370–374
AH6		Estimating and Budgeting Processes	Part 6 Section 2 – pp 250–261
AH7		Evaluating Options	Part 4 Section 3 – pp 150–159
AH8		Project Lifecycle and Deliverables	Part 3 Section 1 – pp 73–75
AH9		Project Organisation Structures	Part 5 Section 2 – pp 189–200
AH10		People in Projects and their Roles	Part 5 Section 4 – pp 211–220
AH11		Project Team Members	Part 5 Section 4 – pp 220–225
AH12		Managing Conflict within the Project Team	Part 5 Section 3 – pp 204–210
AH13		Configuration Management	Part 8 Section 5 – pp 398–400
AH14		Change Orders	Part 8 Section 5 – pp 400–404
AL	Lester A	Project Planning and Control 2nd Edition Butterworth Heineman, 1991	ISBN 07506-11006
AL1		Cost Control	Chapter 19
BoK		Body of Knowledge The Association for Project Management Issue 4, January 2000	ISBN 1-903494-00-1
BS1	British Standards Institution (BSI)	Guide to Project Management	BS 6079 1996
BS1-1		The Project Life-cycle	Section 5
BS1-2		Project and Company Organisational Structures	Section 3
BS1-3		The Matrix Organisation	Section 3.3
BS1-4		Release Project Funds	Section 4.4.22
BS1-5		The Project Management Process	Section 4

Index Item	Author	Title/Sub-title	Ref/page no.
BW	Basu R and Wright JN	Total Manufacturing Solutions Butterworth Heinemann, 1997	ISBN 0 7506 25872
BW1		Foundation 15: Quality Management	P109-125
CC	CCTA	Managing Successful Programmes The Stationery Office, 1999	ISBN 0-11-330016-6
CK	Cleland D and King W	Project Management Handbook 2nd Edition Van Nostrand Reinhold, 1988	ISBN 0 442 22114 2
CK1		Factors affecting project success	Section 35 pp 902-917
CK2		Leadership, Motivation, and the Project Manager	Section 29 pp 739-770
CK3		Design concepts for Project Management Information and Control Systems	Section 27 pp 671-678
CK4		Project Stakeholder Management	Section 13 pp 275-301
DL	Lock D	Project Management Gower, 1996	ISBN 0 566 07709 4
DL1		Managing Changes and Production Permits	pp 433 - 447
DL2		Cost Estimates, parts 1 and 2	Chapters 4 and 5 pp 59-100
DL3		Purchasing	Chapters 16,17,18 pp 326-380
DL4		Commercial Management	Chapter 6 pp101-123
GPMT		Glossary of Project Management Terms The Association for Project Management, 2000	
GR	Reiss G	Programme Management Demystified E and F N Spon, 1996	ISBN 0 419 21350 3
GR1		What is Programme Management	Chapter 1
GR2		Managing the Programme – Structured Diagrams	Chapter 2, page 55
HK	Kerzner H	Project Management, a Systems Approach to Planning, Scheduling and Controlling. 5th Edition Van Nostrand Reinhold, 1995	ISBN 0 442 01907 6
HK1		Contracts	pp 1075 - 1090
HK2		The Variables for Success	Chapter 9 pp 491-505
HK3		Matrix Organisational Form	Chapter 3.5 pp 118-133
HK4		Communications	Chapter 5.13 pp 275-281
HK5		Types of Estimates and Pricing Processes	Chapter 14.2 pp 721-727
HK6		Managing Conflict	Chapter 7.3 pp 403-424

Index Item	Author	Title/Sub-title	Ref/page no.
JFW	Woodward JF	Construction Project Management – Getting it right first time. Thomas Telford, 1997	ISBN 0 7277 2557 2
JFW1		Quality Management and Project Performance	Chapter 7 – pp 104–121
JFW2		Project Appraisal	Chapter 12 – pp 196–215
JKP	Pinto JK (ed)	Project Management Handbook Jossey-Bass, 1998	ISBN 0 7879-4013-5
JKP1		Conflict Management	Chapter 22 pp 353–375
JKP2		Negotiation Skills	Chapter 21 pp 330–351
JKP3		Project Team Motivation	Chapter 20 pp 312–329
JKP4		Closing out the Project	Chapter 14 pp 237–246
JKP5		Project Stakeholders and their Management	Chapter 4 pp 55–72
JS	Stranks J	Health and safety in practice – Health and Safety Law Pitman Publishing, 1994	ISBN 0 273 60733 2
JS1		The Principal Regulations	Chapter 4 pp 67–199
KLJG	Lockyer K Gordon J	Project Management and Project Network and Techniques – 6th Edition of Critical Path Analysis and other Project Network Techniques – Pitman Publishing, 1996	ISBN 0 273 614 541
KLJG1		Resource Analysis	Chapters 17 and 18
KLJG2		The Network and Bar chart	Chapter 16
KLJG3		Application of Network Techniques	Chapters 11–15
MFLK	Field M and Keller L	Project Management The Open University, 1998	ISBN 1-86152-274-6
MFLK1		Scheduling	Section 3.3
MFLK2		Negotiating	Section 4.2.
MFLK3		Success Factors	Section 1.4.3
MFLK4		Financial Feasibility	Section 1.2.3
MFLK5		Resources and Scheduling	Section 3.4
MFLK6		Closing the Project	Section 7
MFLK7		Change: Cause and Effects	Section 6.2
MFLK8		Communicating	Section 5, page 271
MFLK9		Organisational Objectives	Section 1.1.5
MFLK10		Managing Stakeholders	Section 4.4
MFLK11		Leading	Section 4.2.4
NS	Smith N	Project Cost Estimating Thomas Telford, 1995	ISBN 0 7277 2032 5
NS 1		Purpose and Stages of Estimating	pp 3-10

Index Item	Author	Title/Sub-title	Ref/page no.
NJS	Smith NJ	Engineering Project Management Blackwell Science, 1995	ISBN 0-632-03924-8
NJS1		Project Appraisal and Risk Management	Chapter 2
NJS2		Tender Procedures and Contract Policy	Chapter 13
NJS3		Project Control using Earned Value Techniques	Chapter 11
NJS4		Project Cash Flow	Chapter 7
NJS5		Contract Strategy	Chapter 12 pp 188–209
PR2	CCTA	Prince 2 The Stationery Office, 1996	ISBN 011 330 685 7
PR2.1		Configuration Management	Section 10 and Appendix B
PR2.2		Appendix A2 – Business Case	
SHN	Simon P, Hillson D and Newland K (ed)	Project Risk Analysis and Management Guide The Association for Project Management, 1997	ISBN 09531 15 90 0 0
RB	Buttrick R	The Project Workout Pitman, 1997	ISBN 0 273 62680 9
RB1		Closing the Project	Chapter 27 pp 355–364
RB2		Closure and Post Implementation Reviews	Page 345
RT2	Turner JR	The Commercial Project Manager McGraw Hill, 1995	ISBN 0-07-707946-9
RT2.1		Risk Analysis	Chapter 4
RT2.2		Estimating Costs and Revenues	Chapter 3
RT2.3		Investment Appraisal	Section 5
RT2.4		Procurement and Contract Strategy	Section 17 pp 243–267
RT3	Turner JR	The Project Manager as Change Agent McGraw Hill, 1996	ISBN 0-07-707741-5
RT3.1		Organising for change: a versatile approach	Section 4
RT3.2		Projects for implementing change	Section 3
RT3.3		On being a manager and a leader	Section 6
RT3.4		Project teams and individuals	Section 5
RT4	Turner JR	The Handbook of Project Based Management– Second Edition McGraw Hill Book Company, 1999	ISBN 0-07-709161-2
RT4.1		Pitfalls in Project Management	Section 4.3
RT4.2		Configuration Management	Section 7.4
RT4.3		The Context of Projects	Part 1 pp 35–90

Index Item	Author	Title/Sub-title	Ref/page no.
RT4.4		Planning at strategic level: Milestone Plans	Section 5.4 pp 104–123
RT4.5		Managing Time	Section 9 pp 201–228
RT4.6		The Management Process (Lifecycle)	Section 1 pp10–23
RT4.7		Managing Quality	Section 7 pp149–170
RT4.8		Final Project Definition and Closure	Chapter 24 pp 498–509
RT4.9		Managing Risk	Chapter 10 pp 229–257
SIG1	APM	Contract Strategy for Successful Project Management The Association for Project Management, Specific Interest Group on Contracts and Procurement, 1998	ISBN 0953 1590 1 9
SIG1.1		Terms of Payment	Section 4

Notes