National Occupational Standards for Project Management

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Comment

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# National Occupational Standards for Project Management

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Section 1 - Introduction

Background

National Occupational Standards for Project Management were first produced by the Engineering Industry Standing Conferences in 1996. National and Scottish Vocational Qualifications based upon these Standards were accredited shortly afterwards.

In spite of increasing recognition of Project Management as a professional discipline in its own right, there was little evidence of any substantial utilisation of either the Standards or the qualifications. This created difficulties when it came to justifying a review and revision of the Standards. There was however evidence that those sectors of industry that had been involved in their development were making use of them, whereas those sectors not involved in their development were reluctance to do so.

In 2001 the Regulatory Authorities commissioned a study to assess the feasibility of producing sector independent National Occupational Standards of Competence in Project Management. The views of all sectors of the UK economy were canvassed using their then National Training Organisations (NTOs) as a conduit, and substantial interest in the development of such Standards became apparent.

A full review of all existing standards relating to Project Management was commissioned and a project Steering Group was established under the chairmanship of an independent practising project manager to ensure neutrality of the outcome. Membership included representatives of wide ranging sectors, together with the Association for Project Management (APM), representing the interests of the generic professional Project Management community.

The existing standards were refined by expert practising project managers from the various sectors represented. The process included a major two-day workshop during which comments and suggestions for improvements and additions were generated. Consultation drafts were subsequently distributed widely for comment. The emerging Standards received widespread endorsement and were approved by the Regulatory Authorities in August 2002.
**Structure and Content of the Standards**

The Standards have been written as 51 separate units of competence, each relating to a distinct functional area. Between them they cover the full spectrum of project management functions including both the strategic and the operational. They are fully compatible with the APM Body of Knowledge and have been developed through consideration of previously defined project management related standards.

The Standards are supported by:

i) Qualification Structures.

ii) an Assessment Strategy, agreed with Awarding Bodies that have expressed the intention to offer National and Scottish Vocational Qualifications (N/SVQs) based upon them.

iii) indications of where evidence relating to the Units is likely to contribute as evidence towards Key or Core Skill Units.

Each of the units of competence is self-contained, but between them they cover the full project life cycle.

Full advantage has been taken of opportunities to present the Standards in a structure and language that overcomes issues encountered by users and identified in the Beaumont Report on N/SVQs published in 1995.

The Units of Competence contain five main components:

i) A Unit Commentary which defines the context of the unit.

ii) A listing of general Underpinning Knowledge required by the Unit.

iii) Statements of Competent Performance required by the Unit, headed “You must be able to:”.

iv) A listing of the scope of key words or phrases used within the Statements of Competent Performance, i.e. an explanatory amplification of the meaning of the key words or phrases as required by the Unit.

v) A listing of specific knowledge required by the Unit.

A balance has been sought in the definition of the above items to allow for interpretation in accordance with project context and business environment.
**Glossary of terms**

The definitions of terms used within the Standards are taken from BS6079 – 2:2000. A listing is provided within Section 3 of this document.

**Acknowledgements**

The project drew upon the knowledge and expertise of employees representing wide ranging organisations, former NTOs, professional institutions and other interested bodies. Thanks must go to all employers for allowing the staff concerned to participate and give freely their time, expertise and considered views. Thanks must equally go to the participating individuals for their dedicated efforts towards securing the best possible end result.

The contributions of David Shannon, the Steering Group Chairman, Richard Dodd, the project manager, Tim Feest, the project secretary, and Jim Watson, the project consultant and technical moderator, are particularly acknowledged.

Special gratitude is due to the Projects and Standards Approval Group of the Regulatory Authorities for authorising the project and providing the funding, and to the essential support and guidance provided throughout by their officers.

Members of the Project Steering Group

<table>
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<tr>
<th>Name</th>
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<td>Brian Humphries</td>
<td>Scottish Qualifications Authority</td>
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Using Occupational Standards

The Qualifications and Curriculum Authority has defined competence as “The ability to perform to standards required in employment across a range of circumstances and to meet changing needs”. Occupational Standards provide a means of measuring competence in the workplace.

The Standards thus provide a natural basis for the development of National and Scottish Vocational Qualifications in Project Management, and it is the role of Awarding Bodies to take this process forward.

The Standards have a wide variety of other purposes, at both the corporate and the individual level, however, the more significant of which are indicated below. (Ref Towards a Competent Workforce by Bob Mansfield and Lindsay Mitchell, published in the UK by Gower)

Recruitment and selection
- Preparing recruitment specifications and job advertisements
- Identifying components of jobs: present and future

Job design and evaluation
- Producing the job specification and description
- Monitoring roles and responsibilities
- Establishing criteria for payment and reward systems

Training and development programmes
- Identifying and specifying organisational needs
- Recognising individual achievements
- Identifying training and development needs: Continuous Professional Development
- Strategic planning of organisational requirements

Development of education and training programmes
- Curriculum design and development
- Relating skills-based learning to workplace requirements
- Developing specific learning objectives
- Developing the knowledge content for educational and training courses.
- Design of qualifications

Career guidance and development
- Auditing skills required and needed
- Recognition of competences achieved
- Identifying career progression opportunities

Professional requirements
- Linking Standards to the requirements of professional Institutions (e.g. APM)
Section 2 – Units of Competence

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Unit PM 1 Develop strategic objectives for the project

Unit Commentary

This Unit is concerned with the competence required to develop the overall technical and commercial objectives for projects.

The starting point is to establish the business needs and stakeholders’ aims and objectives for the project. Who are the stakeholders? There may be several: directly, including those who have appointed the project manager, those who will pay for the work to be carried out, and those who will be accountable for project outcomes. Indirectly, there may be others whose aspirations and expectations must also be taken into account including political or financial sponsors or beneficiaries from the project’s successful conclusion. Stakeholders, therefore, will often be a mix between those directly and indirectly interested in the project and those within, and external to, the project manager’s own organisation.

It is possible that these aims originate from poorly defined or vague needs. Hence, included in the Unit are the functions of clarifying the client’s aims, developing options and final agreement with the client of the objectives to be met.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes for formulating aims and objectives for proposed projects
- Idea generation and evaluation
- Legislative and regulatory frameworks
- Specifications, degree of detail and formats
- Communication and presentation techniques

You must be able to:

a) identify relevant stakeholders and their influence on the project and outcomes
b) establish the stakeholders’ needs and responsibilities for the project
c) determine or review the scope of the project
d) define broad or initial objectives from the various inputs and sources of information
e) identify and quantify the benefits required of the project
f) gather sufficient information to assess and make a judgement on the relevance of the factors
g) draw on specialist advice where necessary
h) analyse the impact of the factors and make recommendations for changes where necessary
i) verify stakeholders’ requirements can be justified and satisfy the factors
j) select and define the objectives from suitable options and in terms of measurable outcomes
k) keep stakeholders involved where appropriate and present the project objectives clearly in the required format for their agreement
Unit PM 1 Develop strategic objectives for the project

Scope:

1 Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

2 Scope of the project:
   • Appropriate to the business needs
   • Parameters and interfaces

3 Objectives:
   • Initial and finalised
   • Commercial
   • Financial
   • Performance
   • Regulatory

Specific knowledge required for this Unit:

i) Ways of identifying and clarifying stakeholders’ aims, expectations and objectives
ii) Understanding the stakeholders’ aims and strategic objectives
iii) Understanding the influence the stakeholders’ aims and strategic objectives may have on the project
iv) Means of influencing and ensuring the accuracy of stakeholder information that can be used
v) Difference between short term and long term objectives
vi) Factors affecting the feasibility of project objectives
vii) Relevant experience that can assist in the evaluation of the objectives
viii) Significance of outside influences on the project objectives
ix) Relevant legislative and regulatory requirements
x) Constraints that could influence the objectives
xi) Techniques for assessment of factors
xii) Sources and types of specialist advice
xiii) Outside influences as identified in the Scope section
xiv) Techniques for defining measurable outcomes
xv) Organisational procedures and systems
xvi) Procedures and formats for communicating and agreeing objectives for the project with stakeholders

4 Benefits:
   • Improved service, product(s) or facilities

5 Factors:
   • Regulatory
   • Commercial, technical or financial constraints
   • Environmental, location and local conditions
   • Impinging and linking activities
Unit PM 2  Identify and evaluate options for the project

Unit Commentary

This Unit is concerned with the competence required to identify and evaluate appropriate options that provide solutions to satisfy the overall objectives for projects.

The options are considered in the light of the defined project objectives and their suitability is tested against the stakeholders’ aims and objectives for the project. Who are the stakeholders? There may be several: directly, including those who have appointed the project manager, those who will pay for the work to be carried out, and those who will be accountable for project outcomes. Indirectly, there may be others whose aspirations and expectations must also be taken into account including political or financial sponsors or beneficiaries from the project’s successful conclusion. Stakeholders, therefore, will often be a mix between those directly and indirectly interested in the project and those within, and external to, the project manager’s own organisation.

It is possible that these aims originate from poorly defined or vague needs. Hence, included in the Unit are the functions of clarifying the client’s aims, assessing factors that will influence the achievement of objectives, developing options and gaining the agreement of the client or customer for the options to be adopted.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes for identifying and developing options, assessing risks and constraints
- Idea generation techniques
- Analysis and evaluation techniques
- Legislative and regulatory frameworks
- Specifications, degree of detail and formats
- Communication and presentation techniques

You must be able to:

a) collect sufficient information to support the project proposal and the implementation of options
b) identify and develop options that meet the project’s objectives
c) identify the risks and constraints associated with each option
d) evaluate the options against the risks and constraints
e) recommend preferred options
f) communicate and keep stakeholders involved
Unit PM 2   Identify and evaluate options for the project

Scope:

1. Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

2. Scope of the project:
   - Appropriate to the business needs
   - Parameters and interfaces

3. Information:
   - Objectives
   - Regulatory

4. Risks:
   - Regulatory
   - Commercial, technical or financial constraints

Specific knowledge required for this Unit:

i) Ways of identifying and clarifying stakeholders’ aims, expectations and objectives
ii) Understanding the stakeholders’ aims and strategic objectives and the influence these may have on the project
iii) Acceptable methods of influencing and ensuring the accuracy of stakeholder information that can be used
iv) Difference between short term and long term objectives
v) Factors affecting the feasibility of project objectives
vi) Experience you can draw on
vii) Significance of outside influences on the project objectives
viii) Relevant legislative and regulatory requirements
ix) Constraints that could influence the objectives
x) Techniques for assessment of factors
xi) Sources and types of specialist advice
xii) Techniques for defining measurable outcomes
xiii) Organisational procedures and systems
xiv) Procedures and formats for communicating and agreeing objectives for the project with stakeholders
Unit PM 3  Prepare the business case for undertaking a project

Unit Commentary

This Unit is concerned with the competence required to prepare and present a business case for a proposed project.

The business case is a strategic justification for undertaking the project and needs to take full account of the identified aims and objectives of the sponsor and stakeholders as well as the criteria and issues that are likely to impact on the implementation and operation of the final outcome.

It needs to identify the benefits of undertaking the project and present relevant support documentation on issues such as: the commercial viability, costs and payback period, overall risks, options and choice of option as well as the operational impact of the project.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes for developing a business case
- Idea generation techniques
- Analysis and evaluation techniques
- Legislative and regulatory frameworks
- Specifications, degree of detail and formats
- Communication and presentation techniques

You must be able to:

a) verify that the objectives reflect the needs of the sponsor and other key stakeholders
b) review the potential expenditure and agree a budget
c) review and prioritise perceived risks and opportunities
d) consider options and decide on a recommended approach
e) analyse and prepare the arguments for justifying the business case for the sponsor and other key stakeholders to commit to undertaking the project
f) prepare all the necessary supporting documentation
g) prepare and present the business case in a format which is likely to gain support of the sponsor and other key stakeholders
Unit PM 3  Prepare the business case for undertaking a project

Scope:

1  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

2  Perceived risks:
   • Commercial and operational risk
   • Financial
   • Legal and regulatory
   • Resources
   • Environmental
   • Political
   • Information and assumptions

3  Documentation:
   • Business case
   • Capital and revenue estimates or costings
   • Outline schedule and timescales
   • Analyses and projections
   • Reference material
   • Research and studies

Specific knowledge required for this Unit:

i) How to analyse expenditure on previous projects and make use of the results
ii) How to analyse the possible risks to the organisation associated with proposed budgets
iii) How to carry out cost-benefit analysis in regard to expenditure
iv) How to decide on targets, standards and monitoring methods
v) The importance of clear and accurate budgets to the running of schedules of work and your role and responsibility in relation to this
vi) The principles of budgeting and how to apply them
vii) How to carry out budget negotiations
viii) How to resolve areas of uncertainty and disagreement in a way which is satisfactory to those involved in the decision making process
ix) How to develop and argue an effective case for expenditure
x) How to present budgets in a way which is likely to gain the support of stakeholders
xi) How the specification can be formatted to meet different stakeholder requirements
xii) How to gain the support and agreement of others
xiii) Methods of assessing adequacy of information
xiv) The sources of additional information
xv) The kinds of trends and developments which might influence future expenditure
xvi) How to collect and validate information required to evaluate a case for expenditure
xvii) The types of information required to make decisions on expenditure
xviii) How to encourage and enable people to take part in the negotiation and agreement of budgets for schedules of work
xix) How to gain the commitment of team members to proposed budgets
xx) The types of information required to develop budgets and how to validate these
xxi) How to enable people to contribute to proposals
xxii) Innovations and improvements that could be made over current practice
xxiii) Developments that could save significant costs
xxiv) The organisational objectives and strategies relevant to the schedules of work
xxv) The procedures which need to be followed to make expenditure proposals
xxvi) Impact of regulations
xxvii) The principles which underpin effective expenditure planning
Unit PM 4 Prepare a project brief

Unit Commentary

This Unit is concerned with the competence required to define and agree a project brief that satisfies the established objectives.

The brief is seen in this context as a strategic proposal for authorisation to undertake a project to meet the stakeholders’ business objectives and define the key deliverables.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes needed to draft a project brief
- Idea generation and evaluation techniques
- Analysis and evaluation techniques
- Legislative and regulatory frameworks
- Specifications, degree of detail and formats
- Communication and presentation techniques

You must be able to:

a) verify the objectives and stakeholders’ expectations
b) take account of the various inputs and impinging factors
c) clearly delineate the boundaries and parameters of the project so that they are understood by the stakeholders and are useful to other activities
d) identify opportunities for improving the outcome of the project
e) establish the criteria for what may constitute change
f) produce a brief that is compatible with achieving the overall objectives and the development of a schedule
g) prepare and present the project brief in an approved format for authorisation
Unit PM 4  Prepare a project brief

Scope:

1  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

2  Scope of the project:
   • Appropriate to the business needs

3  Other activities:
   • Estimating
   • Planning and resourcing
   • Finance

Specific knowledge required for this Unit:

i) Methods of assessing adequacy of information
ii) Sources for obtaining additional information
iii) Techniques for analysis of factors
iv) Techniques for managing risk or uncertainty
v) Criteria considered and discounted, and reasons why
vi) Technological considerations in determining the means of implementing the project
vii) Logistical considerations in determining the means of implementing the project
viii) Means of eliminating ambiguity in specifications
ix) How support and agreement of others should be gained
x) Means of allowing for contingencies
xi) Explanation of functions included and excluded
xii) Impact of regulations
xiii) Consequences of changes in specifications
xiv) Format of the project brief in the context of different purposes
xv) Innovations and improvements that could impact on the project
xvi) Means of improving cost effectiveness

4  Input information:
   • Aims and objectives
   • Environment and regulatory issues
   • Key groups interested in the project outcomes
   • Timescales and impinging activities

5  Factors:
   • Previous practice and experience
   • Constraints
   • Risks

6  Format:
   • Compliance with organisational conventions
   • Paper or computer based
Unit PM 5  Establish and maintain a culture of risk awareness

Unit Commentary

This Unit is concerned with the competence required by management in order to establish and develop an environment in which the project team can work together at assessing and balancing risk factors across the whole project life cycle. The project manager needs to also ensure that those with operational responsibilities implement appropriate measures.

This Unit applies primarily to the processes involved in managing the project - not normally to the product produced as a result of the project - i.e. bringing a project to completion within time and cost parameters and to specification. Where project management includes the procurement of product design or the marketing of the end product, accountability can be very wide and could be a consideration.

The Unit encompasses the strategic role in the promotion of a culture of risk awareness, which impacts on the evaluation and overall management of commercial risk and the risks to project outcomes, including the direct and consequential risks of damage to people, property and the environment.

This Unit requires you to have underpinning knowledge and understanding of:

- Risk management techniques and the execution of procedures
- Analysis and evaluation techniques
- Implications of relevant legislation
- Communication and presentation techniques

You must be able to:

a) ensure personnel are aware of their roles and responsibilities for identifying risks and are aware of the associated management systems and procedures
b) encourage personnel to contribute to the development and review of risk management systems and procedures
c) communicate the advantages of risk management in a manner which promotes and gains commitment
d) make sure stakeholders are aware of any risk management requirements that apply to their operations and of their responsibilities, including the financial implications
e) raise risk awareness in appropriate circumstances
Unit PM 5  Establish and maintain a culture of risk awareness

Scope:

1 Areas of perceived risk:
   - Commercial or contractual
   - Technical issues
   - Local and environmental conditions
   - Resources or procurement
   - Regulatory or political influences
   - Lack of information and data

2 Communicate:
   - Verbally in meetings
   - In writing

3 Personnel:
   - Team members
   - Support or supply chain staff

Specific knowledge required for this Unit:

i) Ways of identifying the probability of a risk situation occurring
ii) Ways of clarifying risk issues and of assessing the likely impact and consequences for the project
iii) How to prioritise and manage risk issues
iv) Identification of secondary or additional risks due to changes as the project progresses
v) Ways of influencing, monitoring and controlling the risk environment
vi) Reporting systems that provide timely and accurate information
vii) Relevant legislative and regulatory requirements
viii) Constraints that introduce risk and could influence the objectives
ix) Techniques for assessment of factors
x) Sources and types of specialist advice
xi) Techniques for defining and controlling measurable outcomes
xii) Information sources: internal; external
xiii) Organisational procedures and systems
xiv) Opportunities, procedures and formats for communicating and promoting risk awareness throughout the project with stakeholders

4 Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

5 Appropriate circumstances:
   - Start-up or briefing meetings
   - Progress meetings
Unit PM 6 Identify strategic risk and evaluate options for minimising project risk

Unit Commentary

This Unit is concerned with the competence required to identify strategic risk factors, evaluate options for minimising them across the whole project environment, and to ensure that those with operational responsibilities implement appropriate measures.

This Unit applies primarily to the processes involved in managing the project - typically at the preparation of the project brief stage and not normally to the product produced as a result of the project - i.e. bringing a project to completion within time and cost parameters and to specification. Where project management includes the procurement of product design or the marketing of the end product, accountability can be very wide and could be a consideration.

The Unit encompasses the strategic role for the identification, evaluation and overall management of commercial risk and the risks to project outcomes, and includes the direct and consequential risks of damage to people, property and the environment.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes involved in risk management
- Analysis and evaluation techniques
- Implications of relevant legislation
- Communication and presentation techniques

You must be able to:

- a) identify all perceived and relevant areas of risk
- b) identify roles and responsibilities for risk management
- c) access sources of information and advice
- d) analyse, evaluate and prioritise the risks and potential consequences
- e) develop and recommend response options for reducing risk to a level of acceptability
Unit PM 6  Identify strategic risk and evaluate options for minimising project risk

Scope:

1 Areas of perceived risk:
   - Commercial or contractual
   - Technical issues
   - Local and environmental conditions
   - Resources or procurement
   - Regulatory or political influences
   - Lack of information and data

2 Sources of information and advice:
   - Past records and experience
   - Specialist expertise (internal or external)
   - Libraries or Professional Bodies

3 Analysis and evaluation techniques:
   - Statistical
   - Contingency planning
   - Modelling

Specific knowledge required for this Unit:

i) Methods of identifying the probability of a risk situation occurring
ii) Methods of clarifying risk issues and assessing the likely impact and consequences for the project
iii) How to prioritise and manage risk issues
iv) Identification of secondary or additional risks due to changes as the project progresses
v) Methods of influencing, monitoring and controlling the risk environment
vi) Reporting systems that provide timely and accurate information
vii) Relevant legislative and regulatory requirements
viii) Constraints that introduce risk and could influence the objectives
ix) Techniques for assessment of factors
x) Sources and types of specialist advice
xi) Techniques for defining and controlling measurable outcomes
xii) Information sources: internal or external
xiii) Organisational procedures and systems
xiv) Opportunities, procedures and formats for communicating and promoting risk awareness throughout the project with stakeholders

4 Analysis and evaluation outcomes:
   - Ranking and prioritising risk
   - Risk register

5 Potential consequences to:
   - Business
   - People
   - Property
   - Environment
Unit PM 7  Review the effectiveness of measures for controlling risk

Unit Commentary

This Unit is concerned with the competence required to monitor and review the effectiveness of the measures in place for controlling risk across the whole project environment and to ensure that those with operational responsibilities implement appropriate measures.

This Unit applies primarily to the monitoring processes involved in managing the project implementation—not normally to the product produced as a result of the project, i.e. bringing a project to completion within time and cost parameters and to specification. Where project management includes the procurement of product design or the marketing of the end product, accountability can be very wide and could be a consideration.

The Unit encompasses the identification, evaluation and overall management of commercial risk, the risk to project outcomes and includes the direct and consequential risks of damage to people, property and the environment.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes associated with risk management
- Analysis and evaluation techniques
- Legislative and regulatory frameworks
- Specifications, degree of detail and formats
- Communication and presentation techniques

You must be able to:

a) monitor and review the processes for assessing the effectiveness of risk control measures
b) ensure the items of risk are controlled in line with agreed procedures and accepted best practice
c) monitor and address risk issues in a timely and effective manner
d) reassess risks as the project progresses until they occur or expire
e) address emerging risks in line with best practice
f) implement the selected options in accordance with organisational, legal, national and international requirements
g) ensure that appropriate records are maintained, which are accurate and up to date, and can be used for reference to justify improvements and advice in the future
Unit PM 7  Review the effectiveness of measures for controlling risk

Scope:

1. Areas of perceived risk:
   - Commercial or contractual
   - Technical issues
   - Local or environmental conditions
   - Resources or procurement
   - Regulatory or political influences
   - Lack of information and data

2. Sources of information and advice:
   - Historical data
   - Progress reports
   - Regulations, legislation and codes of practice
   - Professional Bodies, articles or colleagues
   - Risk specialists

Specific knowledge required for this Unit:

i) Methods of identifying the probability of a risk situation occurring
ii) Methods of clarifying risk issues and assessing the likely impact and consequences for the project
iii) How to prioritise and manage risk issues
iv) Identification of secondary or additional risks due to changes as the project progresses
v) Methods of influencing, monitoring and controlling the risk environment
vi) Reporting systems that provide timely and accurate information
vii) Relevant legislative and regulatory requirements
viii) Constraints that introduce risk and could influence the objectives
ix) Techniques for assessment of factors
x) Sources and types of specialist advice
xi) Techniques for defining and controlling measurable outcomes
xii) Information sources: internal or external
xiii) Organisational procedures and systems
xiv) Opportunities, procedures and formats for communicating and promoting risk awareness throughout the project with stakeholders
Unit PM 8  Establish the requirements of the project management team

Unit Commentary

This Unit is concerned with the competence required to establish the requirements of the project management team and the provision of support for the team.

The project team may comprise people from within and outside the project manager’s organisation. It is the group of key individuals that must collaborate effectively for the project objectives to be achieved.

This Unit requires you to have underpinning knowledge and understanding of:

- Management styles and organisation
- Selection and interviewing techniques
- Types of contractual arrangements and terms of appointment for project team personnel

You must be able to:

a) develop proposals for the composition of the project management team
b) define the project team’s roles and responsibilities and ensure they are communicated in a manner that is understood and accepted
c) ensure the capabilities of the project team are appropriate for the execution of the project
d) identify project management team support services to satisfy the project schedule requirements and constraints
e) develop operational parameters which will enable the project team to execute the project schedule
f) ensure health, safety and welfare responsibilities are defined and communicated to the relevant personnel
Unit PM 8 Establish the requirements of the project management team

Scope:

1. Constraints:
   - Time
   - Cost
   - Limits of authority
   - Organisational procedures

2. Types of support service:
   - Specialist or technical
   - Administration
   - Facilities

3. Sources of support services and resources:
   - Internal or external

4. Operating parameters:
   - Communication plan
   - Working procedures
   - Key decision stages

Specific knowledge required for this Unit:

i) Sources of support services and resources
ii) Procedures for obtaining support services and resources
iii) Terms and conditions of employment
iv) Sources of information
v) Team performance and development procedures
vi) Organisational management styles and techniques
vii) Work and responsibility allocation mechanisms
viii) General health, safety and welfare legislation
ix) Recognised codes of practice
x) Specified project requirements
Unit PM 9  Establish the project team’s working methods and monitor performance

Unit Commentary

This Unit is concerned with the competence required to establish and set up the project team’s working methods, the monitoring of the team’s performance, and verifying that appropriate health, safety and welfare arrangements are in place.

The project team may comprise people from within and outside the project manager’s organisation. It is the group of key individuals that must collaborate effectively for the project objectives to be achieved.

*This Unit requires you to have underpinning knowledge and understanding of:*

- General principles and processes for developing and motivating teams
- Organisation and minuting of project team meetings
- Communication and presentation techniques

*You must be able to:*

a) implement organisational procedures to optimise the capabilities of the team and obtain support services in a manner that preserves goodwill

b) establish arrangements for achieving effective communications between all parties during the development and execution of the project

c) establish and implement appropriate methods for project monitoring, evaluation, and change control

d) monitor project progress and team performance, ensuring the team is provided with the information necessary to facilitate team effectiveness for achieving the objectives

e) convene and conduct project team meetings in a manner appropriate to the needs of team members, relevant to the success of the project objectives, summarising and recording the outcomes clearly and accurately

f) verify that the working methods to be used meet statutory requirements for the identification and control of hazards

g) ensure health, safety and welfare responsibilities are defined and communicated to the relevant personnel
Unit PM 9  Establish the project team’s working methods and monitor performance

Scope:

1  Communications:
   - Meetings
   - Reports
   - People
   - Network links

2  Project monitoring and evaluation methods for:
   - Conformity with specification of requirements
   - Compliance with statutory requirements
   - Compliance with schedule
   - Financial or resource control
   - Outputs: performance, quality or safety

3  Types of support service:
   - Specialist or technical
   - Administration
   - Facilities

4  Sources of support services and resources:
   - Internal or external

Specific knowledge required for this Unit:

i) Arrangements for project development and execution
ii) Communication plans
iii) Methods of project monitoring and evaluation
iv) Methods and procedures of change control
v) Motivation techniques
vi) Organisational procedures
vii) General health, safety and welfare legislation
viii) Recognised codes of practice
ix) Specified project requirements
Unit PM 10  Develop operational objectives for the project

Unit Commentary

This Unit is concerned with the competence required to interpret the strategic objectives for a project and develop the more detailed operational objectives and options in order to produce an achievable specification of requirements. The specification of requirements will need to satisfy the objectives and terms set out in the original project brief.

The specification of requirements covers the key deliverables, options, quality, costs, and change control criteria for authorisation to implement.

This Unit requires you to have underpinning knowledge and understanding of:

- Legislative and regulatory frameworks
- Communication and presentation techniques
- Organisational procedures and systems

You must be able to:

a) source sufficient information to decide the operational objectives for the project
b) instigate action to clarify and verify the requirements where the information is insufficient
c) identify feasible options for carrying out the project that are compatible with the achievement of the project objectives
d) investigate critical and uncertain issues related to the means of carrying out the project
e) identify areas of risk and consider opportunities for reducing risk and improving performance
f) determine criteria that are suitable for selecting a preferred means from the range of information and identified options
g) decide on the means of carrying out the project, having considered the relevant criteria, in order to meet the project objectives
h) keep stakeholders informed on progress and involved in relevant decisions
Unit PM 10  Develop operational objectives for the project

Scope:

1  **Scope of the project:**
   - Appropriate to the business needs

2  **Input information:**
   - Brief and objectives for the project
   - Stakeholders’ and end users’ interests
   - Resources, cost or time
   - Legislation and regulations
   - Impinging activities

3  **Means of carrying out the project:**
   - Strategy for achieving operational objectives
   - Scheduling and use of resources

Specific knowledge required for this Unit:

   i)  Difference between short term and long term objectives
   ii) Factors affecting the feasibility of project objectives
   iii) Experience you can draw on
   iv)  Significance of outside influences on the project objectives
   v)   Relevant legislative and regulatory requirements
   vi)  Constraints that could influence the objectives
   vii) Techniques for assessment of factors
   viii) Sources and types of specialist advice
   ix)  Techniques for defining measurable outcomes
   x)  Procedures and formats for communicating and agreeing objectives for the project with stakeholders
   xi)  Reporting requirements

4  **Criteria to select means of carrying out the project:**
   - As defined by project objectives
   - Quality
   - Time
   - Cost
   - Risk, uncertainty or benefits

5  **Stakeholders:**
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes
Unit PM 11 Prepare the specification of requirements

Unit Commentary

This Unit is concerned with the competence required to develop an achievable specification of requirements for a project to be progressed and monitored. The specification of requirements must satisfy the objectives and terms set out in the original project brief.

The specification of requirements covers the key deliverables, options, quality, costs, and change control criteria for authorisation to implement.

This Unit requires you to have underpinning knowledge and understanding of:

- Legislative and regulatory frameworks
- Specifications, degree of detail and formats
- Analysis and evaluation techniques
- Communication and presentation techniques
- Organisational procedures and systems

You must be able to:

a) interpret and understand the objectives and the stakeholders’ expectations for the project
b) clearly define inputs to the project and the factors impinging on it
c) stipulate the change control procedures and the stakeholders’ involvement
d) show the specification of requirements meets, and is compatible with, the chosen means of achieving the objectives and the development of a schedule
e) indicate options and opportunities for achieving the desired outcomes and objectives effectively
f) follow organisational procedures, and ensure that the specification meets the functional requirements and is fully supported by supplementary documentation
g) prepare the specification of requirements in the required format for presentation and authorisation
Unit PM 11  Prepare the specification of requirements

Scope:

1  Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

2  Format:
   - Organisational procedures
   - Compliance with standard conventions

3  Inputs:
   - Objectives and the project brief
   - Means for carrying out the project
   - Legal, regulatory, financial, schedule
   - Resources

4  Factors:
   - Commencement of the project
   - Outcomes of the project
   - Risk and contingencies

5  Changes to:
   - Project objectives
   - Project context
   - Availability of resources

6  Functional requirements:
   - Background
   - Technical
   - Options
   - Risks
   - Financial

Specific knowledge required for this Unit:

i)  Means of eliminating ambiguity in specifications
ii) How the support and agreement of others should be gained
iii) Means of allowing for contingencies
iv)  Explanation of functions included and excluded
v)   Impact of regulations
vi)  Consequences of changes in specifications
vii) Format of the specification of requirements in the context of different purposes
viii) Innovations and improvements that could be made over current practice
ix)   Developments that could save significant costs
Unit PM 12  Estimate and specify resources required for the project

Unit Commentary

This Unit is concerned with the competence required to estimate and specify the resources required to achieve the defined project objectives.

For large and complex projects, the role of the project manager will normally be to direct and verify the activities of others that are involved in the detail of estimating resources. On other projects, the project manager may well be expected to do some of this work.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes for identifying and estimating resource requirements
- Legislative and regulatory frameworks
- Analysis and evaluation techniques
- Whole life costs
- Specifications
- Relevant software
- Communication and presentation techniques

You must be able to:

a) verify that the specified activities and resources meet the requirements of the project
b) verify that methods of estimating conform to best practice
c) verify that resources required for activities are estimated and specified accurately
d) ensure that any assumptions on which estimates are based are clearly stated
e) identify and verify contingencies and the basis for them
f) accurately assess the scope and consequences of changes where they involve adjustments to the project success factors
g) explain to stakeholders how the estimated resources meet the specification of requirements
Unit PM 12  Estimate and specify resources required for the project

Scope:

1  Resources:
   - People
   - Materials, equipment or facilities
   - Finance
   - Data and information systems

3  Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

5  Assumptions:
   - Needs
   - Quantity or quality
   - Availability

Specific knowledge required for this Unit:

i) Order of magnitude estimating - purposes and limitations
ii) Methods of determining time, cost or quality relationships and their influence on the accuracy of the total estimate
iii) Direct costs, indirect costs or allowances
iv) Methods of increasing accuracy of costings and estimates
v) Sources of information
vi) Examples of good current practice in estimating
vii) Means of obtaining budget estimates from others
viii) Means of specifying resources in the categories of: finance, human resources, materials, facilities, information
ix) Application of appropriate software
x) Styles and formats for presenting information

2  Degree of accuracy:
   - Sufficient for programming or scheduling
   - Sufficient for acquisition of resources

4  Methods of estimating resources:
   - Calculated or measured
   - Comparative
   - In-house or commercial databases

6  Contingency allowances:
   - For component activities
   - For critical and uncertain factors
Unit PM 13  Develop outline programmes or schedules for projects

Unit Commentary

This Unit is concerned with the competence required to develop outline programmes or schedules for projects.

A programme defines the scope of a number of projects or activities that are to be resourced, scheduled and undertaken, and is a scheme that includes all the projects or activities needed to achieve the objectives.

A programme is sometimes referred to as a multi-project schedule.

For large and complex projects, the role of the project manager will normally be to direct and verify the activities of others that are involved in the detail of the programmes or schedules. On other projects, the project manager may well be expected to do some of this work.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes involved in producing programmes or schedules
- Legislative and regulatory frameworks
- Specifications
- Relevant software
- Communication and presentation techniques

You must be able to:

a) determine with stakeholders the level of detail and accuracy required for the programme or schedules
b) estimate, verify and agree with stakeholders the resources and time needed to achieve the required accuracy of the programme or schedules
c) verify that the methods of scheduling activities and resources conform to best practice and are consistent with the scale and complexity of the activity
d) verify that scheduled activities were derived from an activity analysis
e) verify that programme or schedule links between activities are correctly identified
f) verify that the duration of each group of activities is estimated to the required degree of accuracy
g) analyse opportunities for change where reductions in duration are requested by stakeholders, and identify the main areas for achieving the reductions
h) present the programme or schedule in a manner that will gain the agreement of stakeholders and ensure their continuing support
Unit PM 13  Develop outline programmes or schedules for projects

Scope:

1  Degrees of accuracy:
   • Related to requirements for control of resources
   • Compliance with project objectives and impinging factors

2  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

Specific knowledge required for this Unit:

i)  Methods of preparing and structuring programmes or schedules

ii) Significance of terms used in planning and scheduling

iii) Dependencies and restraints between starts and ends of activities

iv)  Determination and understanding of critical paths

v)  Dealing with uncertainty

vi) Scheduling of resources determined by demand

vii) Use of work activity analysis techniques

viii) Application of appropriate software

3  Analysis:
   • Work activities
   • Hierarchy
   • Critical path

4  Presentation:
   • Charts
   • Networks
   • Schedules
Unit PM 14  Develop a work breakdown structure for the project

Unit Commentary

This Unit is concerned with the competence required to develop a work breakdown structure, in order to facilitate and check the development and progress of the schedule for a project.

The work breakdown structure is a way that a project may be divided by level into discrete groups for programming or scheduling, cost planning and control purposes.

A schedule defines the scope of the work to be undertaken and timetable for a project. It is a scheme that has been planned to include all the activities that are to be resourced, scheduled and undertaken over a period of time to achieve the required project outcomes.

For large and complex projects, the role of the project manager will normally be to direct and verify the activities of others that are involved in the detail of the schedule. On other projects, the project manager may well be expected to do some of this work.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes of developing work breakdown structures
- Specifications
- Relevant software
- Communication and presentation techniques

You must be able to:

a) verify that you have sufficient information on the project to prepare an appropriate work breakdown structure
b) derive the activities required to achieve the project outcomes, to the level of accuracy and detail needed for scheduling and resourcing
c) produce a work breakdown structure which meets the specified requirements for the project
d) present the work breakdown structure in a format suitable for facilitating the project programme or schedule, procurement and implementation
Unit PM 14 Develop a work breakdown structure for the project

Scope:

1 Information:
- Project brief, objectives, expectations
- Specification of requirements
- Start and finish points, phasing
- Constraints

2 Scope of the project:
- Appropriate to the business needs
- Single project
- Combination of projects

3 Activities:
- Project phases
- Project components
- Project dependencies

4 Work breakdown structure which can be:
- Product based
- Task or function based
- Cost-centre based
- Others

5 Specified requirements:
- Contractual requirements
- Statutory and regulatory requirements

6 Presentation:
- Written
- Electronic

Specific knowledge required for this Unit:

i) Methods of defining activities and the advantages and disadvantages associated with them
ii) Levels of disaggregation in a work breakdown structure
iii) How the work breakdown structure can be used
iv) Styles and formats for presenting work breakdown structures
Unit PM 15 Specify activities for project schedules

Unit Commentary

This Unit is concerned with the competence required to identify, specify and prioritise work activities in order to plan and develop a schedule for a project.

A schedule defines the scope of the work to be undertaken and timetable for a project. It is a scheme that has been planned to include all the activities that are to be resourced, scheduled and undertaken over a period of time to achieve the required project outcomes.

For large and complex projects, the role of the project manager will normally be to direct and verify the activities of others that are involved in the detail of the schedule. On other projects, the project manager may well be expected to do some of this work.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes of developing project plans and schedules
- Legislative and regulatory frameworks
- Whole life costs
- Specifications
- Relevant software
- Communication and presentation techniques

You must be able to:

a) specify and verify the activities needed to meet the requirements of the project
b) ensure that all the essential work activities have been identified in sufficient detail to produce a project schedule
c) verify that methods of estimating conform to best practice
d) verify that resources required for component activities are estimated and specified accurately, and that sufficient information is provided
e) ensure that any assumptions on which estimates are based are clearly stated
f) identify and verify contingencies and the basis for them
g) accurately assess the scope and consequences of changes where they involve adjustments to the project success factors
h) check the estimated resources are consistent with achieving a successful project outcome
i) explain to stakeholders how the estimated resources meet the specification of requirements
Unit PM 15 Specify activities for project schedules

Scope:

1 Activities:
   - People
   - Materials, equipment or facilities
   - Finance
   - Data and information systems

2 Degree of accuracy:
   - Sufficient for programming or scheduling
   - Sufficient for acquisition of resources

3 Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

4 Contingency allowances:
   - For component activities
   - For critical and uncertain factors (risks)

Specific knowledge required for this Unit:

i) Methods of defining activities and the advantages and disadvantages associated with them
ii) Order and magnitude of activities - purposes and limitations
iii) Methods of determining time, cost or quality relationships and their influence on the accuracy of the total estimate
iv) Direct costs, indirect costs or allowances
v) Methods of increasing accuracy of activity costs and estimates
vi) Sources of information about good current practice in estimating
vii) Means of obtaining budget estimates from others
viii) Means of specifying resources in the categories of: finance, human resources, materials, facilities, information
ix) Application of appropriate software
x) Styles and formats for presenting information
Unit PM 16 Recommend the means of procuring resources for projects

Unit Commentary

This Unit is concerned with the competence required to identify sources and recommend the means of procuring resources for the project schedule.

A schedule defines the scope of the work to be undertaken and timetable for a project. It is a scheme that has been planned to include all the activities that are to be resourced, scheduled and undertaken over a period of time to achieve the required project outcomes.

For large and complex projects, the role of the project manager will normally be to direct and verify the activities of others that are involved in the detail of procuring resources to meet the requirements of the schedule. On other projects, the project manager may well be expected to do some of this work.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes of procurement
- Legislative and regulatory frameworks relating to procurement
- Analysis and evaluation techniques
- Specifications, degree of required detail and formats used
- Communication and presentation techniques

You must be able to:

a) verify that the specifications or work breakdown structure for the project are suitable to allow resourcing to proceed
b) obtain information, to determine the means and options for procuring the resources
c) identify and research options for procuring resources
d) evaluate identified options against constraints and criteria, and select the preferred options for further analysis
e) categorise potential providers for each group of resources that meet the needs of the schedule, and record them in an appropriate format to facilitate decision making and procurement
f) recognise the benefits or disadvantages of grouping resources together, and reflect these in the selection of the preferred procurement options
g) make recommendations to stakeholders on the means of procuring resources, ensuring the justifications are recorded in a format that aids decision making and resource procurement
Unit PM 16  Recommend the means of procuring resources for projects

Scope:

1  Resources:
   • Internal or external to the organisation
   • Equipment, materials, supplies
   • Contractors, suppliers, individuals
   • Financial
   • Services

2  Suitability:
   • Feasibility
   • Consistency
   • Level of detail
   • Recognition of competing demands
   • Cost

3  Means of procuring resources:
   • Contract
   • Loan or exchange
   • Internal allocation

4  Estimates of resources:
   • Quantities
   • Quality
   • Cost
   • Timing and duration

5  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

6  Criteria for the evaluation of options:
   • Project objectives
   • Cost
   • Quality
   • Stakeholder preference
   • Other

7  Grouping:
   • Contract or sub-contract
   • By provider
   • Shared with other schedules

Specific knowledge required for this Unit:

i) Type, level and sources of information needed to evaluate procurement options
ii) Methods of procurement relevant to the project area
iii) Methods of evaluating procurement options
iv) Areas of perceived risk and associated contingency planning
v) Implications of varying project specifications
Unit PM 17  Develop a detailed schedule for the project

Unit Commentary

This Unit is concerned with the competence required to develop a detailed schedule for the project.

A schedule defines the scope of the work to be undertaken and timetable for a project. It is a scheme that has been planned to include all the activities that are to be resourced, scheduled and undertaken over a period of time to achieve the required project outcomes.

For large and complex projects the role of the project manager will normally be to direct and verify the activities of others that are involved in the detailed scheduling of the project. On other projects the project manager may well be expected to do some of this work.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes of developing project programmes and schedules
- Legislative and regulatory frameworks
- Specifications, degree of detail and formats
- Understanding of relevant software
- Communication and presentation techniques

You must be able to:

a) determine the level of detail and accuracy required for the schedules with stakeholders
b) estimate, verify and agree with stakeholders the resources and time needed to achieve the required accuracy of the schedule
c) verify that the methods of scheduling component activities and resources conform to best practice and are consistent with the scale and complexity of the activity
d) verify that scheduled activities were derived from a component activity analysis
e) verify that schedule links between component activities are correctly identified
f) verify that the duration of each group of component activities is estimated to the required degree of accuracy
g) analyse opportunities for change where reductions in duration are requested by stakeholders, and identify the main areas for achieving the reductions
h) verify that the schedules are formatted to facilitate implementation
i) identify critical and sub-critical paths and include adequate contingency to reflect risks
j) present the schedule in a manner that will gain the agreement of stakeholders and ensure their continuing support
Unit PM 17  Develop a detailed schedule for the project

Scope:

1 Level of accuracy:
   - Related to requirements for control of resources
   - Compliance with project objectives and impinging factors

2 Stakeholder:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

Specific knowledge required for this Unit:

i) Methods of preparing and structuring schedules
ii) Significance of terms used in planning and scheduling
iii) Dependencies and restraints between starts and ends of activities
iv) Determination and understanding of critical paths
v) Dealing with uncertainty
vi) Scheduling of resources determined by demand
vii) Use of work activity analysis techniques
viii) Application of appropriate software
ix) Styles and formats for presenting information

3 Analysis:
   - Work activities
   - Hierarchy
   - Critical path

4 Presentation:
   - Charts
   - Networks
   - Schedules
Unit PM 18  Monitor risks and review the effectiveness of measures for controlling them

Unit Commentary

This Unit is concerned with the competence required to monitor risks and review the effectiveness of measures for controlling risk factors across the whole project environment. The project manager must also ensure that those with operational responsibilities implement appropriate measures.

This Unit applies primarily to ensuring that the processes for risk management during the life of the project are in place and are reviewed on a regular basis – i.e. bringing a project safely to completion within time and cost parameters and to specification.

The Unit encompasses the promotion of a culture of risk awareness, and the evaluation and overall management of the risk to project outcomes, and includes the direct and consequential risks of damage to people, property and the environment.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and techniques of risk management
- Information sources: internal, external
- Implications of relevant legislation
- Analysis and evaluation techniques
- Organisational and industry-recommended systems and procedures
- Communication and presentation techniques

You must be able to:

a) ensure that effective risk control measures are in place
b) monitor and regularly review the risk management processes
c) ensure risk management is conducted in line with procedures and accepted best practice
d) access sources of information and advice
e) identify and implement improvements to the risk control strategy, to bring them into line with procedures and accepted best practice
f) produce and maintain records that are accurate, up-to-date and that can be used for future reference
Unit PM 18  Monitor risks and review the effectiveness of measures for controlling them

Scope:

1. Areas of risk:
   - Project related activities, resources, schedule and outcomes
   - People, property or environmental factors
   - Health and safety
   - Business, commercial or financial
   - Legal constraints
   - Security issues
   - Political or economic

2. Sources of information and advice:
   - Statutes or regulations and related guidance
   - Technical guidance or research reports
   - Business or commercial guidance
   - Colleagues or internal specialists
   - External specialists
   - Experience of others

Specific knowledge required for this Unit:

i) Monitoring and review techniques as applied to risk control measures
ii) Risk identification and classification methods
iii) Risk analysis techniques: qualitative and quantitative
iv) Methods of assessing the potential consequences of risks, either singly or in combination
v) Methodology and practice of project re-appraisal
vi) Hazard and operational risks
vii) Updating procedures
viii) Change control techniques
ix) Allocating ‘owners’ of risk
Unit PM 19  Identify perceived risks and evaluate options for their control

Unit Commentary

This Unit is concerned with the competence required to identify and assess the impact of perceived risks and their influence on the outcomes of the project schedule. The setting for the Unit is the evaluation process and overall management of the risks to project outcomes, including the direct and consequential risks of damage to people, property and the environment.

The Unit identifies the project manager’s accountability for assessing and balancing risk factors across the whole project environment and throughout its implementation, and for ensuring that those with operational responsibilities implement appropriate measures.

The Unit encompasses the promotion of a culture of risk awareness.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles of risk management and control techniques
- Analysis and evaluation techniques
- Probability theory
- Communication and presentation techniques

You must be able to:

a) identify all areas of perceived risk and review them with stakeholders
b) identify relevant risks correctly, rank and record them
c) access appropriate sources of information and seek advice when necessary
d) analyse and evaluate the risks to establish potential consequences
e) evaluate options for controlling perceived risks
f) develop mitigating actions that address the risks effectively
g) identify and allocate contingencies
Unit PM 19  Identify perceived risks and evaluate options for their control

Scope:

1 Areas of perceived risk:
   - Uncertainty or unplanned circumstances
   - Schedules or resources
   - People, property or environmental factors
   - Technological
   - Commercial or contractual
   - Weather, environmental conditions or Acts of God
   - Legal constraints or litigation
   - Health and safety

2 Sources of information and advice:
   - Statutes or regulations and related guidance
   - Technical guidance or research reports
   - Business or commercial guidance
   - Colleagues or internal specialists
   - External specialists
   - Experience of others

3 Options for controlling risk:
   - Monitor
   - Contingency planning
   - Research or investigate
   - Technology

Specific knowledge required for this Unit:

i) Risk analysis techniques: qualitative and quantitative
ii) Implications of relevant legislation
iii) Potential consequences and opportunities of risks
iv) Techniques for collecting and evaluating information
v) Probability analysis
vi) Contingency management
vii) Information sources internal and external
viii) Organisational systems and procedures
ix) The technology and environment in which risk analysis techniques will be used
x) Implications of National, European and local regulations and codes of practice
xi) Updating procedures
Unit PM 20  Monitor risks and review contingency plans and actions

Unit Commentary

This Unit is concerned with the competence required to monitor risks and to have appropriate contingency action plans in place to remove or limit the risk throughout the course of the project’s implementation. The setting for the Unit is the ongoing evaluation and management of the risks to project outcomes, including the direct and consequential risks of damage to people, property and the environment.

The Unit identifies the project manager’s accountability for assessing and reviewing the contingency plans and consequential action to mitigate risks and hazards across the whole project environment, and for ensuring that those with operational responsibilities implement appropriate measures.

The Unit encompasses the promotion of a culture of risk awareness.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles of risk management and control techniques
- Analysis and evaluation techniques
- Probability theory
- Communication and presentation techniques

You must be able to:

a) monitor and review emerging and previously identified risks and opportunities, in line with procedures
b) ensure sufficient, timely and appropriate information and advice is received throughout the project
c) review and amend contingency action plans for emerging areas of risk and opportunity
d) implement adjustments and improvements where shortcomings are found
e) maintain and update appropriate records
f) review and monitor the requirements for, and level of, contingency requirement
Unit PM 20  Monitor risks and review contingency plans and actions

Scope:

1 Areas of risk that may need addressing:
   • Unplanned circumstances
   • Schedules or resources
   • Commercial or contractual
   • Product or service failures
   • Weather, environmental conditions or Acts of God
   • Legal or litigation
   • Political
   • Financial markets
   • Technological

2 Sources of information:
   • Previous experience inside or outside the organisation
   • Published technical
   • Published business

3 Sources of advice:
   • Stakeholders
   • Peers and senior management
   • Specialists from inside or outside the organisation

Specific knowledge required for this Unit:

i) Implications of relevant legislation
ii) Potential consequences and opportunities of risks
iii) Monitoring techniques
iv) Contingency allocation and management
v) Techniques for collecting and evaluating information
vi) Information sources: internal and external
vii) Organisational systems and procedures
viii) The technology and environment in which risk analysis techniques will be used
ix) Implications of National, European and local regulations and codes of practice
Unit PM 21  Ensure the means of securing the required project resources are in place

Unit Commentary

This Unit is concerned with the competence required to ensure the means of securing resources are identified, in order to recommend contractual arrangements.

Contractual arrangements include formal contracts (or sub-contracts) and agreements.

Similar competence is required for both the letting of contracts and in the bidding for contracts.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes of procurement
- Organisation contracting procedures and practices
- Relevant contract law and regulations

You must be able to:

a) verify that the specifications and estimates for the project are suitable to allow resourcing to proceed
b) obtain, in a timely manner from those responsible, any additional information needed to define the requirements precisely, in order to source and acquire the resources
c) identify, quantify and justify to stakeholders any variations to the specifications that would potentially improve the acquisition of resources
d) evaluate the benefits of grouping resource requirements together, and reflect them in the specifications for providing the resources
e) identify the categories of provider for each group of resources that meet the needs of the project, and set them out clearly to facilitate resource procurement
f) implement procedures to secure the necessary resources
g) ensure that appropriate requisitions and contract arrangements are in place
Unit PM 21  Ensure the means of securing the required project resources are in place

Scope:

1 Resources:
   • Internal to the organisation
   • External to the organisation

2 Scope of the project:
   • Appropriate to the business needs

3 Source of resources:
   • Contract
   • Loan
   • Allocation

4 Estimates of resources:
   • Quantities
   • Quality
   • Cost
   • Time or duration

5 Suitability:
   • Feasibility or consistency
   • Level of detail

6 Sources of information:
   • Internal to the organisation
   • External to the organisation

7 Improvements:
   • Cost
   • Time
   • Quality
   • Control
   • Benefits to other activities

8 Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

9 Objectives:
   • Technical
   • Commercial
   • Financial
   • Time
   • Performance
   • Quality
   • Regulatory

10 Grouping:
   • Contract or sub-contract
   • By provider

11 Providers of resources:
   • Internal or external

Specific knowledge required for this Unit:

i) Type and level of information needed for resourcing to proceed successfully
ii) How information on resources is obtained
iii) Criteria for deciding on alternative means of acquiring resources
iv) Types of contract and their application
v) Authority and implications of varying specifications
vi) Preferred suppliers
vii) Identifying appropriate scope of providers of resources in the particular project context
viii) Problems, opportunities and challenges associated with resourcing
Unit PM 22  Select and agree a procurement strategy and procedure(s)

Unit Commentary

This Unit is concerned with the competence required to determine the procurement strategy and associated procedures to be used in a procurement plan.

Contractual arrangements include formal contracts (or sub-contracts) and agreements.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes of procurement
- Types of procurement method and procedures
- Evaluation techniques
- Legal and statutory requirements concerning procurement and contractual arrangements

You must be able to:

a) identify and evaluate feasible and realistic key objectives and criteria for the procurement strategy
b) clarify the requirements and prepare an outline strategy for agreement with stakeholders
c) identify a range of procurement methods capable of meeting the key objectives, criteria and relevant legal requirements, and evaluate and communicate the findings clearly to stakeholders
d) select and recommend the most effective procurement methods and appropriate procedures
e) seek the agreement of stakeholders to the recommendations, and document everything accurately
Unit PM 22  Select and agree a procurement strategy and procedure(s)

Scope:

1. Procurement factors:
   - Type and scope of contract(s)
   - Project duration and complexity
   - Funding sources

2. Procurement strategy:
   - Preferred or imposed terms and conditions of procurement
   - Procurement programme
   - Preferred sourcing

3. Procurement methods:
   - Allocation
   - Single source
   - Competitive tender

4. Evaluation criteria for procurement strategy:
   - Supplier integrity
   - Supplier capability
   - Risk
   - Cost
   - Timescales
   - Quality

Specific knowledge required for this Unit:

i) Feasibility and realistic objectives, factors and strategies
ii) Methods of evaluating the capability of meeting the procurement objectives and criteria
iii) Risk analysis and assessment
iv) Contract law
v) Processes that need to be considered to meet legislative requirements
vi) Type and level of information needed for resourcing to proceed successfully
vii) How information on resources is obtained
viii) Criteria for deciding on alternative means of acquiring resources
ix) Types and conditions of contract and their application
x) Authority and implications of varying specifications
xi) Preferred suppliers
xii) Identifying appropriate scope of providers of resources in the particular project context
xiii) Problems, opportunities and challenges associated with resourcing

5. Procurement procedures:
   - Tendering process
   - Bid evaluation
   - Award recommendation

6. Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes
Unit PM 23  Recommend and agree the type and conditions of contract

Unit Commentary

This Unit is concerned with the competence required to identify and recommend the type and conditions of contract, that satisfies the procurement plan and that is in line with organisational procedures and legal requirements.

Contractual arrangements include formal contracts (or sub-contracts) and agreements.

Similar competence is required for both the letting of contracts and in the bidding for contracts.

This Unit requires you to have underpinning knowledge and understanding of:

- Types and conditions of contract and their different applications
- Analysis and evaluation techniques
- Procurement methods and procedures
- Legal framework and statutory requirements applicable to contracting

You must be able to:

a) clearly identify the parties to, and the purpose of, the contract
b) specify the type, scope and conditions of contract that are appropriate to the project requirements, with a recommendation for the form of contract to be used
c) evaluate and apportion contract risk
d) give the stakeholders clear and accurate information and advice, and provide an opportunity for comment and clarification
e) verify the selection of the appropriate conditions of contract to ensure the contract meets the project requirements
Unit PM 23  Recommend and agree the type and conditions of contract

Scope:

1. Parties to contracts or interested parties:
   - Client or employer
   - Lead contractors or sub-contractors
   - Third parties

2. Type of contract or agreement:
   - Written
   - Verbal

3. Scope of contract:
   - Technical
   - Commercial

4. Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

5. Conditions of contract:
   - Standard
   - Non-standard
   - Implied terms
   - Balance of risk and reward
   - Fixed or variable price

6. Project requirements:
   - Objectives
   - Purpose
   - Milestones and deliverables

Specific knowledge required for this Unit:

i) Organisational procedures and practices
ii) The aims and objectives of parties to the contract
iii) Risk allocation and management process(es)
iv) Forms of contract appropriate to project type
v) Precedents for use of particular types and forms of contract relevant to project or client type
vi) Conditions associated with liabilities and penalties
Unit PM 24  Develop contractual arrangements

Unit Commentary

This Unit is concerned with the competence required to develop contractual arrangements and options as part of the function of managing contracts for projects.

In smaller projects and in work packages, the project manager is likely to be responsible for the majority of the key decisions and actions. In large projects or multi-project programmes, a number of key decisions may need to be referred to or verified by those in higher authority, depending upon the level of authority delegated to the project manager.

This Unit requires you to have underpinning knowledge and understanding of:

- Types and conditions of contract and their different applications
- Procurement methods and procedures
- Legal framework and statutory requirements applicable to contracting

You must be able to:

a) identify the elements of the project to be procured through contractual arrangements and confirm these with interested parties
b) ensure that the specifications for elements to be contracted out are unambiguous and in sufficient detail for potential contractors to make competitive bids
c) ensure that types and forms of the contract selected for each element conform to the procurement strategy
d) ensure that the type and number of contractors invited to bid are sufficient to meet the project objectives and legal requirements
e) check that you have sufficient information on the capabilities of potential contractors, and that it has been analysed against valid criteria for them to be included in a tender list
f) prepare a tender list, for the elements of the project to be contracted out, that is sufficient to attract competitive bids from contractors capable of meeting specified project objectives
g) ensure the invitations to tender comply with organisational, project and legal requirements, and contain sufficient detail for potential contractors to prepare their bids within the specified tender period
h) ensure any queries on invitations to tender are dealt with promptly and equitably, in accordance with agreed tender and organisational procedures, and that records are kept for future reference
i) ensure prompt notification to all bidders where changes to, or clarification of, aspects of the invitations to tender are identified, in accordance with organisational procedures, and ensure records are maintained for future reference
Unit PM 24  Develop contractual arrangements

Scope:

1 Elements of the project:
   - Work packages or services
   - Materials or goods
   - Equipment

2 Interested parties:
   - Line management or colleagues
   - Clients or customers

3 Sufficient information:
   - Previous relevant experience
   - Suppliers’ reputation, reliability or financial standing
   - Suppliers’ capacity and capability

4 Type of contract or agreement:
   - Written
   - Verbal

Specific knowledge required for this Unit:

i) Policy of organisation on contracting for works, goods, materials and services
ii) Organisational procedures and practices
iii) Types and forms of contract appropriate to project type and project elements within your organisation
iv) Precedents for use of particular types and forms of contract within your organisation
v) Methods of identifying potentially suitable contractors
vi) Sources of information to establish suitability of potential contractors
vii) Methods of accessing information to establish suitability of potential contractors
viii) Basic principles of law of contracts including implied terms of contract
ix) Legal requirements governing tendering procedures
x) Ethical considerations in the tendering process
xi) Circumstances in which a contract may be negotiated with a single contractor
xii) The aims and objectives of the parties to the contract

5 Conditions of contract:
   - Standard
   - Non-standard
   - Implied terms
   - Balance of risk and reward
   - Fixed price or ‘cost plus’

6 Invitations to tender include:
   - Specifications
   - Relevant project information
   - Terms and conditions of contracting
   - Timescale for tendering
   - Conditions attached to selection of tenders
Unit PM 25  Review and select tenders

Unit Commentary

This Unit is concerned with the competence required to analyse and select tenders for contracting arrangements as part of the function of managing contracts for projects.

In smaller projects and in work packages, the project manager is likely to be responsible for making the majority the key decisions and actions. In large projects or multi-project programmes, a number of key decisions may need to be referred to or verified by those in higher authority, depending upon the level of authority delegated to the project manager.

This Unit requires you to have underpinning knowledge and understanding of:

- Legal requirements relating to tender selection
- Methods of analysing and summarising of bids
- Methods of dealing with a legal challenge to the tendering process

You must be able to:

a) develop and agree criteria for the selection of bids with interested parties, that maximise the likelihood of achieving both specific and overall project objectives
b) verify that the procedures for bid selection and acceptance conform with organisational and legal requirements, and that they are clearly understood by those involved in the selection process
c) analyse bids and summarise the outcomes against the criteria for selection
d) state and record the reasons why bids are unsuccessful or declared invalid
e) give interested parties the opportunity to confirm that the bidding requirements have been met by the bids to be considered
f) select a preferred tender using agreed criteria and procedures
g) clearly explain any relevant qualifications attached to a recommendation to select a tender made by those involved in the selection process
h) notify the outcome of the tendering process to successful and unsuccessful bidders in a manner that conforms with organisational procedures and legal requirements
Unit PM 25  Review and select tenders

Scope:

1 Criteria:
   - Terms of tender invitation
   - Price
   - Quality
   - Timescale
   - Technical or regulatory compliance
   - Conditions applied by contractor

2 Procedures for bid acceptance:
   - Compliance with terms and conditions of tendering
   - Legal and ethical
   - Unsolicited

3 Procedures for bid selection:
   - Opening of tenders
   - Selection process
   - Confidentiality
   - Bid clarification
   - Options where no bids are fully acceptable
   - Post-tender communications with bidders

Specific knowledge required for this Unit:

i) Policy and procedures for receiving, recording and opening tenders
ii) Methods for analysing and comparing tenders
iii) Criteria used for selection
iv) Tender procedures
v) Parties involved in the selection process
vi) Clarification procedures
vii) Reasons for disqualifying tenders, and implications
viii) Ethical considerations in tender selection
ix) Procedures for notifying bidders of the outcome of their bid
x) Confidentiality requirements in the tendering process

4 Interested parties:
   - Internal department representatives
   - External consultants, advisers
   - Bidders

5 Relevant qualifications:
   - Improvement
   - Further information
   - Changes in specification
   - Contract terms and conditions
Unit PM 26  Verify contract arrangements are in place

Unit Commentary

This Unit is concerned with the competence required to ensure project contractual arrangements are in place, and that they meet the requirements of the project and comply with organisational policy and procedures for managing contracts.

In smaller projects and in work packages, the project manager is likely to be responsible for making the majority the key decisions and actions. In large projects or multi-project programmes, a number of key decisions may need to be referred to or verified by those in higher authority, depending upon the level of authority delegated to the project manager.

This Unit requires you to have underpinning knowledge and understanding of:

- Types and conditions of contract and their different applications
- Procurement methods and procedures
- Legal framework and statutory requirements applicable to contracting
- Methods of dealing with a legal challenge to the tendering process

You must be able to:

a) verify that the tender is sufficiently detailed to prepare the required type and form of contract
b) verify that the documentation specifying the contract requirements and terms and conditions are accurate, complete and conform with procedures
c) verify that the formal contract offer complies with the agreed procedures and legal requirements
d) confirm that the contractor’s acceptance of the contract offer is complete and conforms with agreed procedures and legal requirements
e) ensure that the information required to commence and carry out the contract successfully is clear, accurate and made available, according to the terms and conditions of the contract
f) ensure those affected by, or with responsibilities arising from, the letting of the contract are provided with appropriate information
Unit PM 26 Verify contract arrangements are in place

Scope:

1 Type of contract or agreement:
   • Written
   • Verbal

2 Conditions of contract:
   • Standard
   • Non-standard
   • Implied terms
   • Balance of risk and reward
   • Fixed price or ‘cost plus’

3 Contract requirements:
   • Specifications
   • Programme or schedule
   • Legal and statutory requirements
   • Standards and quality assurance
   • Financial
   • Insurance
   • Liabilities
   • Start and finish times
   • Procedures to be used
   • Reporting requirements

4 Procedures:
   • Contractual
   • Financial
   • Legal, health and safety or environmental
   • Quality assurance
   • Allocation of responsibilities
   • Administration
   • Project control
   • Security

5 Information required for commencement of contract:
   • Specifications
   • Contact points
   • Access, security
   • Statutory and regulatory bodies
   • Nominated contractors and suppliers
   • Contract information and administration

Specific knowledge required for this Unit:

i) Organisational policy, procedures and practices for contracting
ii) Types and conditions of contract appropriate to project type and project elements
iii) Precedents for use of particular types and forms of contract
iv) Basic principles of contract law, including, implied terms of contract
v) Legal requirements governing tendering procedures
vi) Ethical considerations in the tendering process
Unit PM 27  Manage the performance of the team – allocating work

Unit Commentary

This Unit is concerned with the competence required to make the best use of a team and its members, where the project manager may not necessarily be the individual’s direct line manager, so that the team can achieve the project objectives.

It covers the allocation of work to teams, and how the work and responsibilities are distributed. The project manager needs to make sure this allocation makes best use of the available resources, and provides opportunities for learning and development for team members where appropriate. The project manager needs to make it clear what is expected of the team and the team members, and gain their commitment to the programme. Where resources are limited, the project manager may have to prioritise objectives or re-allocate resources while minimising the disruption this may cause.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Organisational and planning techniques
- Counselling techniques
- Problem solving techniques

You must be able to:

a) ensure the allocation of work is consistent with achieving the project objectives, in keeping with the policies and values of the organisation

b) clearly define the responsibilities of the team, and the limits of their authority

c) allocate work in a manner appropriate to those concerned

d) confirm the team’s understanding of, and commitment to, the work allocations at appropriate intervals

e) reach agreement with relevant people on the prioritisation of work or re-allocation of resources, where team resources are insufficient

f) inform the team of changes to work allocations in an appropriate way

g) ensure changes in re-allocation of work minimise inconvenience to the individual and minimise adverse impact on the project
Unit PM 27  Manage the performance of the team – allocating work

Scope:

1  Allocations:
   • Normal working
   • Emergencies

2  Information:
   • Written
   • Oral
   • Graphical

3  Relevant people:
   • Team members
   • Colleagues working at the same level as yourself
   • Higher-level managers or sponsors
   • Customers or suppliers

Specific knowledge required for this Unit:

i) The importance of defining and communicating team responsibilities clearly
ii) How to communicate team and individual responsibilities clearly to those involved
iii) How to develop and present work plans using spoken, written and graphical means
iv) The importance of the effective allocation of work to the team's performance, and your role and responsibilities in relation to this
v) The factors that need to be considered when allocating work to individuals within the team
vi) How to match the allocation of work to learning needs and individual development plans
vii) How to prioritise and re-prioritise work allocations according to resource availability
viii) How changes to work allocations and discussions around them can impact on cost, time and convenience
ix) Why team members should have the opportunity to contribute to how work allocations could be made
x) How to encourage team members to provide suggestions on the allocation of work, and increase commitment to their responsibilities
xi) Team objectives, and the organisational policies and values, all of which have a bearing on the allocation of work within the team
xii) The relevant people with whom negotiations on the allocation of resources need to take place
Unit PM 28  Manage the performance of the team – agreeing objectives and work plans

Unit Commentary

This Unit is concerned with the competence required to make the best use of a team and its members, where the project manager may not necessarily be the individual’s direct line manager, so that the team can achieve the project objectives.

In order to agree objectives and work plans with the team, the project manager needs to set out and agree project objectives and work plans that are specific, measurable, achievable, realistic and time-bound, and which are consistent with the organisation’s policies and the project’s objectives. Team members also need to understand the ways of working in sufficient detail so that they clearly understand their roles, objectives and responsibilities within the team. The objectives and work plans will need to be regularly updated and communicated in the light of progress and changes.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Organisational and planning techniques
- Counselling techniques
- Problem solving techniques

You must be able to:

a) give opportunities to the team members to help define their objectives and work plans
b) develop objectives and work plans that are consistent with team and project objectives and get agreement with the relevant people
c) ensure the objectives, work plans and schedules are realistic and achievable within project and organisational constraints
d) ensure the team objectives and work plans take account of the team members’ abilities, and contribute to their development needs where possible
e) explain the objectives and work plans in sufficient detail, and at a level and pace appropriate to the individual team members
f) confirm team and individual understanding of, and commitment to, objectives and work plans at appropriate intervals
g) provide advice and guidance on how to achieve team objectives in sufficient detail and at times appropriate to the needs of the team
h) update the objectives and work plans regularly, to take account of any individual, team and organisational changes
Unit PM 28  Manage the performance of the team – agreeing objectives and work plans

Scope:

1  Plans:
   - Short term
   - Medium term
   - Long term

2  Constraints:
   - Organisational objectives
   - Organisational policies
   - Resources

3  Team member:
   - People for whom you have functional responsibility
   - People for whom you have line responsibility

4  Communications:
   - Written
   - Oral
   - Graphical

Specific knowledge required for this Unit:

i) The importance of good communication when planning objectives and creating work plans
ii) The importance of consulting with team members and achieving consensus on objectives and work plans
iii) How to encourage and enable team members to define their own work objectives and plans
iv) How to gain the commitment of team members to objectives and work plans
v) The types of issues on which your team members may need advice and guidance
vi) The organisational objectives and constraints which have a bearing on objectives and work plans
vii) How to identify and devise objectives and work plans for the short, medium and long term
viii) The importance of agreeing objectives and work plans which are realistic and achievable
ix) How to match objectives and work plans with individual abilities and development needs
x) The importance of regularly updating objectives and work plans
xi) The difference between someone who is within the manager’s line management control and someone for whom the manager has functional responsibility, and the implications this difference may have for planning work
Unit PM 29  Manage the performance of the team – assessing performance

Unit Commentary

This Unit is concerned with the competence required to assess the performance of a project team and its members, when the project manager may not necessarily be the individual’s direct line manager, so that the team can achieve the project objectives.

In order to assess the performance of the project team, the project manager needs to make it clear what the team will be measured against and how their performance will be assessed. The team should be encouraged to evaluate its own performance wherever possible. Creditable performance should be acknowledged and swift action taken when performance is not achieving the agreed targets or expectations.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Organising and planning techniques
- Counselling techniques
- Problem solving techniques
- Principles of motivation
- Assertiveness techniques

You must be able to:

a) explain the purpose of monitoring and assessment to all those involved
b) give the team opportunities to monitor and assess their own performance against objectives and work plans
c) monitor the performance of the team against agreed objectives and work plans
d) ensure that assessment of the team’s performance is based on sufficient, valid and reliable information
e) conduct assessments objectively, against clear, agreed criteria
f) ensure that assessments take account of the personal circumstances of team members and the organisational and project constraints on their work
Unit PM 29  Manage the performance of the team – assessing performance

Scope:

1 Purpose of assessment:
   - Confirmation of performance against project objectives
   - Team achievements
   - Quality
   - Identification of training needs

2 Information:
   - Qualitative
   - Quantitative

3 Objectives to be considered:
   - Specific
   - Measurable
   - Achievable
   - Realistic
   - Time-bound

4 Constraints:
   - Organisational objectives or policies
   - Project objectives
   - Resources

Specific knowledge required for this Unit:

i) The aims of monitoring and assessment
ii) Communicating the purpose of assessment effectively to those involved
iii) The principles of planning for monitoring and assessment
iv) Different purposes of work monitoring and assessment
v) Assessment techniques
vi) Monitoring techniques
vii) The standards against which work is to be assessed
viii) The information needed to assess the performance of teams
ix) Information gathering and validation techniques
x) The organisational constraints which may affect the achievement of objectives
xi) The types of personal circumstances which may impact on individual performance
Unit PM 30  Manage the performance of the team – providing feedback on the team’s performance

Unit Commentary

This Unit is concerned with the competence required to provide effective feedback to the project team and its members, when the project manager may not necessarily be the individual’s direct line manager.

There will need to be regular meetings of the team, where feedback based on objective assessment of their performance can be given. The feedback should acknowledge successes and achievements, and provide constructive suggestions and encouragement. There is a need to maintain confidentiality and to show respect for the individuals concerned. The team should also be given the chance to respond to feedback and make suggestions on how the team’s performance could be improved.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Counselling techniques
- Problem solving techniques
- Principles of motivation

You must be able to:

a) plan and provide feedback to teams at appropriate times and locations, and in a form and manner most likely to maintain and improve their performance

b) provide clear feedback that is based on objective assessment of their performance against agreed objectives

c) ensure that the feedback acknowledges the team’s and the members’ achievements

d) ensure that the feedback provides the team members with constructive suggestions and encouragement for improving future performance against their work and development objectives

e) present feedback in a way that retains respect for the individual and the need for confidentiality

f) give the team opportunities to respond to feedback, and to contribute to how they could improve their performance in the future
Unit PM 30  Manage the performance of the team – providing feedback on the team’s performance

Scope:

1 Feedback:
   • Positive
   • Constructive
   • Supportive

2 Communication:
   • Oral
   • Written

3 Times and locations:
   • During normal day-to-day activities
   • Team meetings and briefings
   • Formal appraisals
     Confidential counselling

Specific knowledge required for this Unit:

i) Communication and presentation techniques
ii) Principles of positive and constructive feedback
iii) Principles of planning feedback meetings
iv) How to develop mutual respect in the team through feedback
v) Roles and responsibilities for providing performance feedback and for maintaining records
vi) The principles of confidentiality
vii) Selecting and using appropriate information
viii) How to gain commitment
ix) How team performance can be improved through involving others
Unit PM 31 Identify and establish procedures and responsibilities for the project

Unit Commentary

This Unit is concerned with the competence required to ensure that appropriate systems and procedures are in place for the project manager to implement a project. It requires that procedures and responsibilities are identified for the project manager to control the outputs relating to the performance, regulatory, financial, quality assurance and hand-over aspects of the project to be managed.

This Unit requires you to have underpinning knowledge and understanding of:

- Communication techniques
- Organising and planning techniques
- Regulations
- Negotiation and counselling techniques
- Problem solving techniques
- Assertiveness techniques

You must be able to:

a) identify appropriate systems and procedures for the aspects of projects requiring them
b) review existing systems and procedures to verify that they are applicable to project management activities, and whether or not they can be used without modification
c) amend the procedures, where necessary, to facilitate the safe and cost-effective implementation of the project
d) clearly define the authority and responsibilities for all activities
e) discuss with, and explain to, interested parties the proposed systems, procedures and responsibilities
Unit PM 31  Identify and establish procedures and responsibilities for the project

Scope:

1  Procedures:
   - Project management
   - Reporting and authorisation
   - Risk and opportunity management
   - Financial management
   - Resource planning
   - Procurement
   - Security
   - Quality
   - Change control
   - Health and safety
   - Environment

2  Activities:
   - Project management
   - Supply of resources or facilities
   - Risk and opportunity management
   - Financial management
   - Quality control
   - Health, safety and welfare
   - Statutory control and approvals
   - Procurement and contracts
   - Environmental impact

3  Interested parties:
   - Individuals within the project organisation
   - Regulatory authorities
   - Those responsible for implementing aspects of the project(s)
   - Other relevant authorities
   - Local public and pressure groups

Specific knowledge required for this Unit:

i) The relationship of procedures and responsibilities to the schedules and estimates
ii) Relevant authority and accountability of stakeholders and those to be involved in implementing the project
iii) Statutory responsibilities, including health and safety
iv) Risk and opportunity management
v) Change control and variance reporting procedures
vi) Contractual responsibilities and liabilities
vii) Procedures which apply to financial control
viii) Procedures which apply to resource control
ix) Quality management systems
x) Environmental impact
Unit PM 32  Review the progress of projects

Unit Commentary

This Unit is concerned with the competence required to review the progress of projects and the effectiveness of the processes being applied by the project manager. It requires that appropriate procedures are being applied to the co-ordination and delivery of the project outputs relating to the performance, regulatory, financial control, quality assurance and hand-over aspects.

This Unit requires you to have underpinning knowledge and understanding of:

- Communication and presentation techniques
- Organising and planning techniques
- Analysis and evaluation techniques
- Regulations
- Negotiation and counselling techniques
- Problem solving

You must be able to:

a) verify that the schedule and available resources meet the objectives and specification of requirements
b) ensure the resources are deployed in a timely manner
c) review progress to ensure that any departures from schedule are identified
d) assess the likely consequences of departures from schedule and agree changes, if needed, to the original schedule
e) inform and gain support for proposed changes from stakeholders before approving
f) act to mitigate consequences of departures from the schedule agreed with stakeholders
g) provide stakeholders with accurate and timely information on progress
Unit PM 32  Review the progress of projects

Scope:

1  Schedule:
   - Scope of the work
   - Schedules
   - Methods, resource levels

2  Resources:
   - Information
   - Personnel
   - Financial, insurance
   - Equipment, facilities and materials which may be:
     - Internally sourced; externally sourced

3  Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

4  Departures from schedule:
   - Late information
   - Actual, predicted (including trends)
   - Time, cost, quality, scope
   - Unexpected and un-scheduled events
   - Areas of potential or actual conflict

Specific knowledge required for this Unit:

i) Project systems and procedures
ii) Appropriate systems for providing resources, and criteria for applying them
iii) Use of work breakdown structure as a basis for monitoring and control
iv) Methods of assessing progress against schedule
v) Methods of evaluating consequences of schedule change
vi) Change control procedures
vii) Methods for recovery of losses arising out of departures from project schedule by contractors

5  Consequences of departure:
   - Delay
   - Penalties or additional costs
   - Non-compliance with regulations
   - Failure to achieve specified outcomes, or contract variation
   - Consequential impact on impinging programmes
   - Breach of contract

6  Actions to mitigate consequences of departures from schedule:
   - Procedural
   - Contractual
   - Legal
   - Financial
   - Acceleration measures
Unit PM 33  Comply with regulatory requirements

Unit Commentary

This Unit is concerned with the competence required to ensure that systems and procedures are in place that are necessary for the project to be executed in accordance with regulatory requirements, and that provide for appropriate action to be taken in the event of any identified contravention.

This Unit requires you to have underpinning knowledge and understanding of:

- Communication techniques
- Regulations
- Problem solving

You must be able to:

a) identify relevant regulatory requirements, and the actions necessary to implement them
b) seek clarification where regulatory requirements appear to be conflicting, are inaccurate or unclear and, if appropriate, get amendments agreed with the appropriate authorities
c) verify with the regulatory authority the proposed methods of compliance
d) provide the required project access and information to comply with regulatory requirements
e) communicate with regulatory authorities in a professional and courteous manner
f) inform, promptly and accurately, those responsible for the project implementation of the conditions of approval(s) by regulatory authorities
g) ensure compliance is maintained throughout the project's life cycle
Unit PM 33  Comply with regulatory requirements

Scope:

1 Regulatory requirements:
   • To initiate the project
   • Related to project activities, completion, change control or commissioning
   • Health and safety
   • Environmental

2 Appropriate authority:
   • Clients or customers
   • Regulatory authorities:
     • Statutory
     • Non-statutory

3 Those responsible for project implementation:
   • Internal
   • External

Specific knowledge required for this Unit:

i) Systems and procedures
ii) Statutory regulations applying to the project
iii) Non-statutory regulations applying to the project
iv) Sources of specialist advice
v) The actions needed to comply with regulatory requirements
National Occupational Standards for Project Management

Unit PM 34  Review and monitor the financial control of projects

Unit Commentary

This Unit is concerned with the competence required to review and monitor the control systems and procedures necessary to ensure satisfactory financial outcomes to projects. It requires that appropriate control procedures are in place to control the financial aspects and implications to the project.

This Unit requires you to have underpinning knowledge and understanding of:

- Budgeting and financial control techniques
- Analysis and evaluation techniques
- Accountancy practice
- Regulations

You must be able to:

a) verify that the income and expenditure control system is appropriate for project schedules and complies with the legal and organisational requirements
b) verify receipts and payment approval is in accordance with requirements and the authorised procedure(s)
c) ensure income and expenditure has been allocated to relevant account codes
d) monitor project cash flow
e) check that the actual and predicted variances are accurate, and are in accordance with agreed financial control procedures
f) provide stakeholders with explanations of variances, causes, implications and clear recommendations for action
Unit PM 34  Review and monitor the financial control of projects

Scope:

1  Income and expenditure control systems:
   • Authorities for approval
   • Financial reporting
   • Variance reporting

2  Income and expenditure:
   • Project related

3  Variances:
   • Schedule changes
   • Over-expenditure or under-expenditure

4  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

Specific knowledge required for this Unit:

i) Financial control systems and their applications, including variance reporting procedures
ii) Statutory accounting requirements relevant to schedules
iii) Means of assessing and presenting cost control monitoring information
iv) Sources of specialist advice
Unit Commentary

This Unit is concerned with the competence required to manage projects that contribute to the objectives of the sponsoring organisation. Project sponsors may be internal or external to your organisation.

This Unit is for those who manage projects with strategic implications, and who are expected to manage and motivate a team.

In order to lead the project team, the project manager needs to motivate the team members to carry out their tasks professionally with commitment and enthusiasm. This involves ensuring that team members have all the information they need to perform effectively. As part of the leadership role, the project manager will delegate responsibility to appropriate team members and provide opportunities for them to contribute to the project’s development. In doing so, the project manager must be aware of any difficulties the team members may be facing and provide them with necessary support and encouragement.

This Unit requires you to have underpinning knowledge and understanding of:

- Leadership techniques
- Communication and presentation techniques
- Personnel terms and conditions of employment
- Interviewing and counselling techniques
- Principles of motivation

You must be able to:

a) motivate team members to fulfil the tasks allocated to them
b) ensure team members receive clear, accurate and up-to-date information appropriate to their role in the project
c) delegate responsibilities to others in ways which make best use of the team’s resources
d) provide opportunities for team members to contribute to the development of the project
e) identify with any problems the team members and other stakeholders are experiencing
f) provide the necessary support for the team members to achieve their objectives throughout the lifetime of the project
Unit PM 35  Lead the project team

Scope:

1. Team members:
   - People exclusively involved in the project
   - People who have other responsibilities and accountabilities
   - People from outside your organisation

2. Type of project:
   - With strategic implications for the sponsor
   - With substantial financial implications for the sponsor
   - With a high level of complexity
   - Involving external organisations

3. Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

Specific knowledge required for this Unit:

i) Methods which may be used to motivate team members and gain their commitment
ii) How to delegate project responsibilities effectively on a day-to-day basis
iii) The importance of keeping team members properly informed as to their roles and responsibilities in the project
iv) Methods of assessing the performance of the project team
v) The importance of enabling team members to contribute to the development of the project, and different methods of achieving this
vi) Relevant employment procedures
vii) The principles which underpin the effective leadership of projects, and the leaders role in relation to achieving a cohesive and successful team
viii) Styles of leadership which are effective in managing projects
ix) The importance of providing support to team members during projects
x) The types of problems which team members and stakeholders may experience
xi) The types of support which team members may need during projects, and how to identify and provide such support
Unit PM 36  Monitor and adjust activities, resources and plans

Unit Commentary

This Unit is concerned with the competence required to manage projects that contribute to the objectives of the sponsoring organisation. Project sponsors may be internal or external to your organisation.

This Unit is for those who manage projects with strategic implications.

In order to monitor and adjust activities, resources and plans, the project manager must continually monitor and evaluate the project’s schedule, review progress and manage any emerging risks and opportunities. Changes need clear authorisation for work to be undertaken. The project activities and resources must be kept in line with project plans. The project manager must try to identify opportunities for improvements in project activities which may, in turn, lead to adjustments to the plan or schedule. Items of change must be controlled so that disruption to the project is minimised. The stakeholders of the project must be informed of any adjustments needed to the project scope and definition.

This Unit requires you to have underpinning knowledge and understanding of:

- Communication and presentation techniques
- Analysis and evaluation techniques
- Change management techniques
- Planning techniques
- Principles of motivation

You must be able to:

a) review and evaluate progress against project plans or schedules, so that project goals can be achieved
b) identify and manage emerging risks, difficulties and their causes
c) provide clear authorisation for all stages of work to begin, continue and finish on the basis of the plans and the evaluation of progress
d) manage the project activities and resources in line with the plans or, where necessary, adjust the plans in a way that is consistent with the project’s objectives and definition
e) actively seek and evaluate ways of improving the work of the project, and control changes in a way which keeps disruption to a minimum
f) make adjustments to activities, resources and plans with the knowledge and agreement of team members and stakeholders, and ensure adjustments are accurately recorded and securely stored
g) ensure stakeholders are informed promptly of any need to review the project objectives and definition
Unit PM 36  Monitor and adjust activities, resources and plans

Scope:

1  Types of monitoring and evaluation:
   • Direct observation of activities
   • Considering reports from others

2  Type of project:
   • With strategic implications for the sponsor
   • With substantial financial implications for the sponsor
   • With a high level of complexity
   • Involving external organisations

3  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

Specific knowledge required for this Unit:

i)  How to identify, assess and manage emerging risks
ii) How to identify and evaluate ways of improving project processes
iii) The importance of managing change in projects
iv) How to minimise disruption where changes are needed
v) Different project management methods and how to select methods appropriate to the circumstances
vi) Methods to review and evaluate project progress
vii) The importance of authorising all stages of work to start, continue or finish according to your evaluation of progress
viii) The importance of managing activities in line with the project plan
ix) Methods that can be used for maintaining control
x) Why resources need to be tightly controlled, and methods to achieve this
xi) The importance of keeping project sponsors informed of any implications for the project’s scope and definition
xii) The importance of obtaining team members’ agreement to changes in plans
xiii) Other people who need to be consulted on changes
xiv) How to negotiate adjustments to the satisfaction of all those involved
Unit PM 37  Develop solutions to project problems

Unit Commentary

This Unit is concerned with the competence required to manage projects that contribute to the objectives of the sponsoring organisation. Project sponsors may be internal or external to your organisation.

This Unit is for those who manage projects with strategic implications.

In order to develop solutions to project problems, it is necessary to collate, verify and analyse all the information from a variety of perspectives. It is useful to draw on the experience of other relevant people, in addition to your own, in order to contribute to the development of a range of possible solutions. Finally, it is necessary to present these options in a way that enables the relevant people to support the best solutions.

This Unit requires you to have underpinning knowledge and understanding of:

- Idea generating techniques
- Communication techniques
- Principles of motivation

You must be able to:

a) collate and verify all information which is necessary and relevant to the problem, in a way that facilitates effective and efficient analysis

b) analyse the available information from the perspectives of all major stakeholders, identifying and prioritising all known factors according to the project objectives, scope and definition

c) provide team members and stakeholders with opportunities to contribute effectively to the development of solutions

d) develop and present a range of solutions, compatible with the project scope and definition, drawing on your own experience and the good practice of others

e) propose solutions that make optimal use of the resources available

f) clearly present to team members and sponsors the range of solutions that meet the project objectives, scope and definition, objectively outlining the strengths and weaknesses of each

g) obtain the support of stakeholders for selected solution
Unit PM 37 Develop solutions to project problems

Scope:

1 Types of problem:
- Technical
- Slippage
- Financial
- Resource-based
- Project performance
- Quality
- Regulatory

2 Stakeholders:
- Clients or Customers
- Key groups interested in the project outcomes
- Key groups affected by the project outcomes

3 Types of projects:
- With strategic implications for the sponsor
- With substantial financial implications for the sponsor
- With a high level of complexity
- Involving external organisations

4 Team members:
- People exclusively involved in the project
- People who have other responsibilities and accountabilities
- People from outside your organisation

Specific knowledge required for this Unit:

i) The principles of effective problem solving
ii) The importance of collecting as much relevant information as possible, and collating such information in a way which facilitates decision making, and methods to achieve this
iii) The importance of analysing problems from a variety of perspectives
iv) The importance, when considering project problems, of identifying and prioritising the outcomes desired by all major stakeholders
v) The importance of developing a range of possible options in solving problems
vi) The importance of involving a range of relevant people in generating possible solutions
vii) How to present possible solutions in a way which helps relevant people to reach an informed and realistic judgement
viii) The importance of drawing on personal experience and the relevant good practice of others, and how to do so
ix) How to make optimal use of the resources available to the project
Unit PM 38  Maintain communication with project stakeholders

Unit Commentary

This Unit is concerned with the competence required to manage projects that contribute to the objectives of the sponsoring organisation. Project sponsors may be internal or external to your organisation.

This Unit is for those who manage projects with strategic implications.

In order to maintain communication with project stakeholders, the key stakeholders need to receive regular updates on the project. The way information is communicated needs to be in a way that best meets the stakeholders’ needs. Good relationships with stakeholders can assist in the collection and flow of information, which may affect the running of the project. Trust must be built up between all parties, and confidentiality respected throughout.

This Unit requires you to have underpinning knowledge and understanding of:

- Communication and presentation techniques
- Principles of motivation

You must be able to:

a) establish a communication plan for the project
b) ensure that the key stakeholders receive timely and relevant information which is consistent with the project plans and helpful in achieving the project goals
c) provide team members and stakeholders with opportunities to contribute to the information
d) ensure the information meets the stakeholders’ needs, whilst maintaining required levels of confidentiality
e) present the information in ways and formats that are most appropriate to the stakeholders involved
f) distribute information using methods that are effective in reaching the key stakeholders and gaining their attention
g) actively seek and assess information from stakeholders which may affect the running of the project
Unit PM 38 Maintain communication with project stakeholders

Scope:

1. Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

2. Type of project:
   - With strategic implications for the sponsor
   - With substantial financial implications for the sponsor
   - With a high level of complexity
   - Involving external organisations

Specific knowledge required for this Unit:

i) The methods which may be used to keep stakeholders up to date, and how to select methods appropriate to different groups

ii) How to select content, styles, formats and distribution methods for different audiences, and the importance of doing so

iii) The importance of presenting information in a way which is consistent with confidentiality

iv) The importance of involving other relevant people in producing information

v) What contributions other relevant people can make to information, and how to involve them

vi) Organisational procedures and practices

vii) The importance of keeping all key stakeholders informed on project status

viii) The range of stakeholders you need to keep informed
Unit PM 39  Co-ordinate, monitor and control project schedules

Unit Commentary

This Unit is concerned with the competence required to co-ordinate, monitor and control the implementation of a project schedule.

It is the essential competence of a project manager, for the smooth and timely delivery of the project, to ensure that activities are completed in the right sequence, in accordance with specifications and to the right timescales.

This Unit requires you to have underpinning knowledge and understanding of:

- Logistics systems
- Communication and presentation techniques

You must be able to:

a) verify that the schedule is realistic, and that available resources are capable of meeting the project objectives and specification of requirements

b) ensure resources are employed in a timely manner

c) monitor progress to ensure that any departures from the schedule are identified promptly

d) assess identified departures from the schedule and establish the likely consequences

e) define and implement corrective actions, and establish what changes, if any, to the original schedule may be required

f) obtain agreement before implementation, where appropriate

g) take action, if any is required, to manage the consequences of departures from schedule, with the agreement of stakeholders, and implement in accordance with appropriate procedures

h) keep stakeholders informed with relevant and timely information on project developments and progress
Unit PM 39  Co-ordinate, monitor and control project schedules

Scope:

1 Schedule:
   • Scope of activities
   • Start or finish times

2 Resources:
   • Personnel
   • Financial
   • Materials, equipment and or facilities
   • Information

3 Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

4 Departures from schedule:
   • Actual, predicted
   • Time, cost, quality, or scope
   • Unexpected and unscheduled events
   • Areas of potential or actual conflict

Specific knowledge required for this Unit:

i) Systems and procedures for providing resources, and the criteria associated with their application

ii) Use of the work breakdown structure as a basis for monitoring and control

iii) Methods of assessing progress against schedule

iv) Methods of evaluating consequences of schedule change

v) Change control procedures

vi) Methods for recovery of losses arising out of departures from project schedule by contractors

5 Consequences of departures:
   • Delay
   • Penalties or additional costs
   • Non-compliance with regulations
   • Failure to achieve specified outcomes
   • Consequential impact on impinging schedules
   • Contract variation
   • Breach of contract

6 Actions to limit consequences of departures from schedule:
   • Tighter monitoring
   • Procedural
   • Contractual
   • Legal
   • Financial
Unit PM 40  Monitor income and expenditure

Unit Commentary

This Unit is concerned with the competence required to maintain the financial control of the project and to ensure it is delivered within the agreed budget established for its implementation.

The Unit provides the control mechanisms for releasing funds and for the authorisation of payments against targets and milestones, in accordance with the schedule and organisational procedures.

This Unit requires you to have underpinning knowledge and understanding of:

- Budgetary control techniques
- Communication techniques
- Analysis and evaluation techniques

You must be able to:

a) verify that the system for the monitoring and controlling project income and expenditure meets the needs of the implementation schedule, and complies with legal and organisational requirements

b) ensure that project income and expenditure are allocated to the relevant account codes, in accordance with procedures

c) ensure the systems are in place to provide personnel who verify receipts and approve payments with all the necessary information

d) review and monitor project income and expenditure in accordance with agreed procedures

e) ensure that the actual and predicted variances are calculated accurately, in accordance with agreed financial control procedures

f) implement appropriate corrective action to meet or adjust financial forecasts

g) explain causes of variances, the implications, and recommendations for corrective action, to stakeholders in a timely manner
Unit PM 40  Monitor income and expenditure

Scope:

1  Income and expenditure monitoring and control systems:
   • Handling and verifying payments and receipts
   • Authorities for approval
   • Financial reporting
   • Variance reporting

2  Personnel who verify receipts and approve payments:
   • Internal
   • External

3  Variances:
   • Timing not to schedule
   • Over-expenditure or under-expenditure
   • Over payment or under payment

4  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

Specific knowledge required for this Unit:

i)  Financial control systems and procedures, and their application
ii) The importance of monitoring financial income and expenditure
iii) Statutory accounting requirements relevant to schedules
iv) Means of assessing and presenting cost control monitoring information
v)  Sources of specialist advice
vi) Auditing procedures
Unit PM 41 Ensure quality in the implementation of the project

Unit Commentary

This Unit is concerned with the competence required to ensure there is commitment to the delivery and control of quality at all stages of the project’s implementation. It requires the responsibilities to be defined and delegated, and the monitoring and reporting systems to be in place.

This Unit requires you to have underpinning knowledge and understanding of:

- Principles of and processes for quality assurance and control
- Quality assurance approval authorities
- Communication and presentation techniques

You must be able to:

a) verify that the quality assurance procedures are appropriate and sufficient to meet the requirements
b) ensure that a commitment to quality assurance procedures is obtained from those responsible for applying them
c) ensure that data is gathered and recorded in accordance with the agreed quality assurance procedures
d) accurately assess the outcomes and performance against specified or expected targets or milestones
e) identify areas of non-conformance promptly and report them clearly to those who need to know
f) initiate effective remedial action to correct the causes of non-conformance and limit their effect
g) produce and maintain records that are critical to meeting the requirements needed for quality audits
Unit PM 41  Ensure quality in the implementation of the project

Scope:

1 Quality assurance procedures:
   - Company
   - Contractors or suppliers
   - Developed for the project

2 Non-conformance:
   - Materials, equipment or facilities
   - Project outcome
   - Project activity or schedule
   - Project information

3 Criticality:
   - Risk of damage to people, the environment, or property
   - Risk to project schedule
   - Risk of financial loss

4 Audits:
   - Carried out during and after the project schedule
   - Of inspection procedures

Specific knowledge required for this Unit:

i) Quality assurance methods and procedures applicable to the organisation and project area
ii) National or international codes of practice for quality assurance used by own or client organisation
iii) Benefits of the quality assurance system
iv) Sources of information on quality assurance
v) Organisational certification procedures and handbooks
vi) Quality audit processes
vii) Costs of non-conformance
Unit PM 42  Control hand-over of responsibility for the project

Unit Commentary

This Unit is concerned with the competence required to manage the project closure procedures, and to handover responsibilities for the project to the operational authority or sponsor, or to parties who are to progress the project to a subsequent phase. It signifies the successful completion of the project or a phase of the project and that the contractual commitments have been met and accepted by the appropriate authorities.

This Unit requires you to have underpinning knowledge and understanding of:

- Contractual and legal requirements
- Communication and presentation techniques

You must be able to:

a) verify that the plan or schedule for hand-over are adequately defined and clear to those involved
b) define, record and agree the state of the project at hand-over with the relevant stakeholders
c) ensure that the transfer of responsibilities is executed in a way that avoids gaps in responsibility and dual responsibilities occurring
d) ensure that resources and facilities transferred to those responsible for any subsequent project stage or activity are as specified and agreed
e) communicate the transfer of responsibilities to those affected in an accurate and timely manner
f) define the need for outstanding work accurately and clearly, and agree the means and schedule for carrying it out with the stakeholders involved
g) produce proposals for the re-allocation of staff and the disposal of any other resources not included in hand-overs
Unit PM 42 Control hand-over of responsibility for the project

Scope:

1 Scope of hand-over:
   • Completed project
   • Phase completion
   • Component completion:
     • Design
     • Commissioning
     • Operation or production
     • Servicing and maintenance

2 Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

3 Project information on resources and facilities:
   • Data used for carrying out the project
   • Data relating to follow-on action and procedures
   • Verification records
   • Modification records
   • Data relating to statutory and non-statutory approvals
   • Contractual documents
   • Equipment and materials
   • Personnel resources
   • Financial resources

Specific knowledge required for this Unit:

i) Contractual commitments
ii) Legal aspects for the of transfer of responsibilities
iii) Methods of transfer of responsibilities
iv) Means of identifying and categorising outstanding work
v) Use of work breakdown structure and quality assurance system for monitoring and control of hand-over
vi) Use of checklists
vii) Procedures, paperwork and certification
viii) Negotiating techniques
Unit PM 43  Obtain and evaluate feedback on project performance

Unit Commentary

This Unit is concerned with the competence required to analyse and evaluate information provided by others on the project performance, and to initiate action to implement improvements in the processes and practice of managing projects, based on the findings. This is an ongoing process with lessons learnt being implemented, wherever possible, throughout the life of the project rather than left to the end, and the application of lessons learnt to future projects.

In order to evaluate the effectiveness of project planning and implementation, it is necessary to collect, collate and verify all key information about the project, and carry out a comparison of what was planned against what actually happened. It is also necessary to analyse the comparison to identify the reasons for variations, draw out the key lessons and consult with interested parties giving them the opportunity to comment on them. The project manager must also maintain records of the outcomes for retrospective use and disseminate reports with acknowledgement to the contributions made by others.

Areas to be considered for evaluation may include: client or customer relations; management procedures; planning, estimating, scheduling of resources; project team performance and working arrangements; communication patterns; risk and safety performance; quality control systems; commercial and financial arrangements.

This Unit requires you to have underpinning knowledge and understanding of:

- Communication and presentation techniques
- Analytical techniques

You must be able to:

a) identify items upon which feedback is required
b) identify reliable methods and sources, both for obtaining feedback and for co-ordinating, reviewing and recommending improvements for future activities
c) enlist and encourage the co-operation of stakeholders in obtaining feedback, and promote the positive value of obtaining and using feedback
d) identify, obtain, investigate and assess feedback data for its relevance and potential use
e) review feedback data, match it against original requirements and objectives and summarise discrepancies
f) identify, justify, and recommend to stakeholders, the potential improvements based on the analysis of the feedback
g) record and classify agreed improvements
h) report savings, benefits and lessons learnt to stakeholders
Unit PM 43  Obtain and evaluate feedback on project performance

Scope:

1. Feedback:
   • Projects in progress
   • Completed projects

2. Feedback methods and sources:
   • Project monitoring
   • Project records and documentation
   • Meetings or questionnaires
   • From those directly involved in the project’s delivery
   • From those interfacing with or affected by the project

3. Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

4. Benefits:
   • Costs benefits
   • Improved performance and delivery
   • Better control
   • Other benefits

Specific knowledge required for this Unit:

i) How to identify areas for evaluation
ii) How to identify sources of relevant feedback
iii) Methods of obtaining feedback
iv) Methods of identifying and justifying the use of new data, and for recommending improvements
v) How to analyse feedback data
vi) Database systems and procedures used in the project
Unit PM 44  Promote and protect planned work

Unit Commentary

This Unit is concerned with the competence required to promote and protect planned work and those who carry it out. It is concerned with championing, protecting and supporting a project, and those involved in its delivery, from internal or external threats to the project proceeding.

This Unit requires you to have underpinning knowledge and understanding of:

- Project management processes and procedures
- Communication and presentation techniques
- Interpersonal skills

You must be able to:

a) promote the benefits of the project and the plans for delivering the stakeholders' objectives clearly and effectively
b) identify threats to projects, schedules, plans and people involved
c) deal effectively with anticipated threats by taking account of them in the planning and delegation of work
d) take account of the reasons for, and sources of, the threats in the methods adopted to counter them
e) involve stakeholders in risk assessment and ensure that the threats are identified appropriately
f) keep those under threat informed of the support available to them and of the developing situation
g) allocate, as necessary, those resources that are specific and appropriate to the promotion and protection of schedules, projects and plans
Unit PM 44  Promote and protect planned work

Scope:

1  Promoting the benefits of the project:
   • Maintaining the profile of the work and people
   • Promote the work at every opportunity
   • Holding briefings
   • Articles or publications

2  Sources of perceived threats:
   • Committees
   • Boards
   • Political groupings

3  Stakeholders:
   • Clients or Customers
   • Key groups interested in the project outcomes
   • Key groups affected by the project outcomes

Specific knowledge required for this Unit:

i) Method of identifying sources of threat to the project or to those involved
ii) Methods of dealing with threats to the project or to those involved
iii) Methods of identifying and justifying the use of new data and improvements
iv) Strengths, weaknesses, opportunities and threat analysis techniques
v) Presentation techniques
vi) Organisational procedures and practices for project management
vii) Influencing techniques
Unit PM 45  Ensure the completion of project activities

Unit Commentary

This Unit is concerned with the competence required to ensure that everything has been completed satisfactorily, and meets the specifications, in order for the project to be commissioned or handed over to the sponsoring organisation or operating authority.

In order to ensure the completion of project activities, it is necessary to ensure that the project’s goals have been achieved and that all agreed deliverables have been handed over, following agreed procedures. Any difficulties in hand-over must have been resolved and the sponsor’s agreement secured, certifying that the specified work has been done to their satisfaction. The sponsor’s views on the effectiveness of the project can be sought at this stage. This brings the project work to a close and ensures that all necessary closure procedures are followed and completed.

The project sponsor or operating authority may be internal or external to the organisation.

This Unit requires you to have underpinning knowledge and understanding of:

- Project statement of requirements
- Communication and presentation techniques
- Interpersonal skills

You must be able to:

a) verify that the project’s objectives have been achieved to the agreed schedule, costs, and quality criteria
b) ensure that all deliverables are handed over according to agreed procedures
c) resolve any hand-over problems in a way which maintains an effective working relationship with the sponsor
d) obtain agreements from the sponsor that all specified project work has been achieved
e) collect information from the sponsor on the effectiveness of the project and their level of satisfaction with it
f) confirm the completion of the project with team members, and promptly authorise all associated work to be closed in a way which is consistent with the project plans
g) authorise all the necessary procedures relating to finance, resources and personnel to be completed, in accordance with organisational requirements
h) ensure that all records and documents relating to the project are accurate, complete and stored appropriately for the future
Unit PM 45 Ensure the completion of project activities

Scope:

1. Stakeholders:
   - Clients or Customers
   - Key groups interested in the project outcomes
   - Key groups affected by the project outcomes

2. Project:
   - Appropriate to the business
   - Parameters and interfaces
   - With strategic implications for the sponsor
   - With a high level of complexity
   - Involving external organisations

Specific knowledge required for this Unit:

i) Hand-over practices and procedures
ii) Experience of previous or similar projects
iii) How to deal with items of non-compliance
iv) Methods of ensuring that the agreed deliverables have been achieved
v) Procedures for storing records and documents for future use
vi) Procedures for finance, resources and personnel which need to be followed at project closure
vii) The records and documents which need to be completed
viii) The plans and timescales for project closure
ix) Who needs to be involved
Unit PM 46  Evaluate projects

Unit Commentary

This Unit is concerned with the competence required to evaluate project performance, at a particular point in the schedule, and assess how any lessons might be applied in the future. An overall evaluation is likely to take place on the completion of the project, but interim evaluations may take place at key stages of the project schedule.

In order to evaluate the effectiveness of project planning and implementation, it is necessary to collect, collate and verify all key information about the project, and carry out a comparison of what was planned against what actually happened. An analysis of the comparison should identify the reasons for variations, draw out the key lessons and areas for improvement, and provide evidence for consulting with interested parties and giving them an opportunity to comment. Records of the process should be completed so that they can be used to inform future projects. The results need to be reported and disseminated with acknowledgement to the contributions made by others.

This Unit requires you to have underpinning knowledge and understanding of:

- Project evaluation methods
- Project management principles and planning processes
- Principles of resource management techniques
- Organisational procedures and systems
- Quality assurance principles and systems
- Health, safety, and environmental issues
- Specifications, details and formats
- Communication and presentation techniques

You must be able to:

a) plan the most appropriate way for evaluating the project
b) establish clear and precise criteria for evaluating the project
c) obtain accurate information on the project from all valid sources
d) review all relevant information relating to the project
e) consult with all relevant people during the evaluation
f) recommend feasible changes or improvements to future project activities
g) present the results of the evaluation to the appropriate people, according to agreed procedures
h) monitor the impact of the evaluation on the project management process
Unit PM 46 Evaluate projects

Scope:

1 Criteria:
   - Overall performance against original plans and schedule outcomes
   - Quality
   - Financial
   - Change management
   - External influences
   - Conformance to specification

2 Improvements:
   - Specifications or definition
   - Estimates
   - Schedules

3 Project management process:
   - Financial reporting
   - Progress

4 Presentations:
   - Briefing meetings
   - Progress reports

5 Projects:
   - Appropriate to the business
   - Parameters and interfaces

6 Changes:
   - Changes to procedures
   - Improvement in resource management

7 Sources of information:
   - Team members
   - Stakeholders
   - Records and documentation
   - Clients or contractors

Specific knowledge required for this Unit:

i) Methods for evaluating a project
ii) Evaluation criteria for different types of project
iii) Methods for obtaining information on a project
iv) Sources of information on a project
v) Parties to involve in the evaluation process
vi) Typical outcomes and impact areas of evaluation
vii) Recording and reporting procedures
viii) Ways of promoting and presenting results
Unit PM 47 Identify and analyse hazards and specify actions to control risks to people, property and the environment

Unit Commentary

This Unit is concerned with the competence required by the project manager for assessing and managing risk factors across the whole project environment and for ensuring that those with operational responsibilities implement appropriate measures.

This unit applies primarily to the hazard processes involved throughout the project - not normally to any product produced as a result of the project, i.e. it is about bringing a project safely to completion within time and cost parameters and to specification. Where project management includes the procurement, product design or the marketing of the end product, accountability for controlling hazards can be very wide and must be a consideration.

The unit applies to the identification, evaluation and overall management of the risks of damage to people, property and the environment.

This Unit requires you to have underpinning knowledge and understanding of:

- General principles and processes involved in occupational health and safety management
- Hazard identification and analysis techniques
- Environmental impact assessment
- Implications of relevant legislation
- Communication and presentation techniques

You must be able to:

a) identify perceived sources of hazard arising from activities, and relevant areas of risk
b) identify roles and responsibilities for controlling hazards
c) recognise and propose the means of containing hazards, and understand the links to the sources of the hazard or risk
d) identify and record the circumstances which would result from a failure to contain the sources of hazards
e) analyse, evaluate and prioritise the hazards and their potential consequences
f) consider and analyse consequential hazards arising from a combination of events
g) review previous accidents and incidents to ensure that relevant experience has been considered and included in the assessment of hazards and operations
h) access sources of information and advice
i) develop and recommend actions for reducing risk of hazards to a level of acceptability
Unit PM 47 Identify and analyse hazards and specify actions to control risks to people, property and the environment

Scope:

1 Hazards:
   - Arising during the implementation or completion of the project
   - Situations with a potential to injure people, cause ill-health, or damage property
   - Adversely affecting the man-made or natural environment
   - Human error
   - Security

2 Sources of information and advice:
   - Past records and experience
   - Safety, environmental or other specialist expertise
   - Stakeholders
   - Libraries or Professional Bodies

3 Proposed means of containing hazards:
   - Preventative measures
   - Design codes, standards and procedures

Specific knowledge required for this Unit:

i) Methods of identifying hazards and assessing the probability of a risk situation occurring
ii) Methods of clarifying risk and hazard issues and assessing the potential consequences for the project
iii) Understanding how to prioritise and manage hazards
iv) Methods of eliminating, reducing or mitigating the consequences of hazards
v) Qualitative and quantitative risk assessment techniques
vi) Identification of secondary or additional hazards due to changes as the project progresses
vii) Ways of influencing, monitoring and controlling human behaviour
viii) Reporting systems that provide timely and accurate information
ix) Relevant legislative and regulatory requirements
x) Sources and types of specialist advice
xi) Techniques for defining and controlling measurable outcomes
xii) Methods of collecting and evaluating information
xiii) Information sources: internal or external
xiv) Relevant organisational procedures, including those of stakeholders
xv) Opportunities, procedures and formats for communicating and promoting safety and environmental awareness throughout the project with stakeholders

4 Perceived consequences to:
   - People
   - Environment
   - Property
   - Impact on personnel on other parts of the site or adjacent to it
   - Hazards arising during escape / evacuation
   - Failure of preventative, control or mitigation systems
Unit PM 48  Manage the performance of teams and individuals - allocate work to teams and individuals

Unit Commentary

This Unit is concerned with the competence required to allocate work, that makes the best use of a team and its members, so that they can achieve the organisation's objectives.

In order to allocate work to teams and individuals, it is necessary to decide, with the team, how to distribute tasks and responsibilities. The allocation should aim to ensure that it makes best use of team members’ abilities, and provides opportunities for them to learn and develop in their roles. The team members need to understand and be clear as to what is expected of them and have commitment to their work. Where resources are limited, objectives may have to be prioritised or resources reallocated.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Organising and planning techniques
- Counselling techniques
- Problem solving techniques
- Principles of motivation
- Assertiveness techniques

You must be able to:

a) provide opportunities for your team members to recommend how the work should be allocated within the team
b) allocate work in a manner that makes the best use of your team’s resources and the abilities of all its members
c) allocate work that provides your team members with suitable learning opportunities, to meet their personal development objectives
d) allocate work on a basis that is consistent with your team’s objectives, and the objectives, policies and values of your organisation
e) define the responsibilities of your team and its individual members, and the limits of their authority
f) provide sufficient information on the allocation of the work in a manner, and at a level and pace, appropriate to the individuals concerned
g) confirm team and individual understanding of, and commitment to, work allocations at appropriate intervals
h) reach agreement with the relevant people, where team resources are insufficient, on the prioritisation of objectives or reallocation of resources
i) inform the team and its members of changes to work allocations, in a way which minimises the impact on time, cost and inconvenience
MCI C13.1

Unit PM 48  Manage the performance of teams and individuals - allocate work to teams and individuals

Scope:

1 Allocations:
   • Normal working
   • Emergencies

2 Information:
   • Written
   • Oral
   • Graphical

3 Relevant people:
   • Team members
   • Colleagues working at the same level as yourself
   • Higher-level managers or sponsors
   • Customers or suppliers

Specific knowledge required for this Unit:

i) The importance of defining and communicating team responsibilities clearly
ii) How to communicate team and individual responsibilities clearly to those involved
iii) How to develop and present work plans using spoken, written and graphical means
iv) The importance of the effective allocation of work to the team’s performance, and your role and responsibilities in relation to this
v) The factors that need to be considered when allocating work to individuals within the team
vi) How to match the allocation of work to learning needs and individual development plans
vii) How to prioritise and re-prioritise work allocations according to resource availability
viii) How changes to work allocations, and discussions around them, can impact on cost, time and convenience
ix) Why team members should have the opportunity to contribute to how work allocations could be made
x) How to encourage team members to provide suggestions on the allocation of work, and increase commitment to their responsibilities
xi) Team objectives, and the organisational policies and values, all of which have a bearing on the allocation of work within the team
xii) The relevant people with whom negotiations on the allocation of resources need to take place
Unit PM 49  Manage the performance of teams and individuals - agree objectives and work plans with teams and individuals

Unit Commentary

This Unit is concerned with the competence required to make the best use of a team and its members, so that they can achieve the organisation’s objectives.

In order to agree objectives and work plans with teams and individuals, it will be necessary to set out and agree objectives and work plans which are specific, measurable, achievable, realistic, time-bound, and are consistent with the project’s and organisation’s overall objectives and policies. It will also be necessary to explain ways of working in sufficient detail for the team members to understand their personal objectives and responsibilities. There will be a need to update objectives and work plans in the light of progress and changes throughout the project.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Organising and planning techniques
- Counselling techniques
- Problem solving techniques
- Principles of motivation
- Assertiveness techniques

You must be able to:

a) provide opportunities to the team members for them to help define their own objectives and work plans

b) develop objectives and work plans which are consistent with team and organisational objectives, and agree these with all personnel in your area of responsibility

c) ensure that objectives, work plans and schedules are realistic and achievable within organisational constraints

d) ensure that objectives and work plans take account of team members’ abilities and development needs

e) explain the objectives and work plans in sufficient detail, and at a level and pace appropriate to your individual team members

f) confirm team and individual understanding of, and their commitment to, objectives and work plans at appropriate intervals

g) provide advice and guidance on how to achieve objectives in sufficient detail and at times appropriate to the needs of teams and individuals

h) update the objectives and work plans regularly and take account of any individual, team and organisational changes
MCI C13.2

Unit PM 49  Manage the performance of teams and individuals - agree objectives and work plans with teams and individuals

Scope:

1  Plans:
   •  Short term
   •  Medium term
   •  Long term

2  Constraints:
   •  Organisational objectives
   •  Organisational policies
   •  Resources

3  Team member:
   •  people for whom you have functional responsibility
   •  people for whom you have line responsibility

4  Communications:
   •  Written
   •  Oral
   •  Graphical

Specific knowledge required for this Unit:

i)  The importance of good communication when planning objectives and work plans
ii) The importance of consulting with team members and achieving consensus on objectives and work plans
iii) How to encourage and enable team members to define their own work objectives and plans
iv) How to gain the commitment of team members to objectives and work plans
v)  The types of issues on which your team members may need advice and guidance
vi) The organisational objectives and constraints which have a bearing on objectives and work plans
vii) How to identify and devise objectives and work plans for the short, medium and long term
viii) The importance of agreeing objectives and work plans which are realistic and achievable
ix)  How to match objectives and work plans with individual abilities and development needs
x)   The importance of regularly updating objectives and work plans
xi)  The difference between someone who is within the manager’s line management control and someone for whom the manager has functional responsibility, and the implications this difference may have for planning work
Unit Commentary

This Unit is concerned with the competence required to make the best use of a team and its members, so that they can achieve the organisation's objectives.

In order to assess the performance of teams and individuals, it is necessary to make it clear why there is a need for monitoring and assessing their performance. They should be encouraged to evaluate their own performance wherever possible. The evaluation of their performance needs to be against clear, agreed criteria, taking into account organisational constraints and personal circumstances.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Organising and planning techniques
- Counselling techniques
- Problem solving techniques
- Principles of motivation
- Assertiveness techniques

You must be able to:

a) clearly explain the purpose of monitoring and assessment to all those involved
b) provide opportunities for the team and individuals to monitor and assess their own performance against objectives and work plans
c) monitor the performance of teams and individuals at times most likely to maintain and improve effective performance
d) ensure your assessment of the performance of teams and individuals is based on sufficient, valid and reliable information
e) carry out your assessments objectively, against clear, agreed criteria
f) carry out your assessments taking due account of the personal circumstances of team members and the organisational constraints on their work
MCI C13.3

Unit PM 50  Manage the performance of teams and individuals - assess the performance of teams and individuals

Scope:

1  Purpose of assessment:
   - Confirmation of performance against project objectives
   - Team achievements
   - Quality
   - Identification of training needs

2  Information:
   - Qualitative
   - Quantitative

3  Objectives to be considered:
   - Specific
   - Measurable
   - Achievable
   - Realistic
   - Time-bound

4  Constraints:
   - Organisational objectives or policies
   - Project objectives
   - Resources

Specific knowledge required for this Unit:

i) The aims of monitoring and assessment
ii) Communicating the purpose of assessment effectively to those involved
iii) The principles of planning for monitoring and assessment
iv) Different purposes of work monitoring and assessment
v) Assessment techniques
vi) Monitoring techniques
vii) The standards against which work is to be assessed
viii) The information needed to assess the performance of teams
ix) Information gathering and validation techniques
x) How to encourage involvement and motivate team members
xi) How to enable team members to monitor and assess their own work
xii) The organisational constraints which may affect the achievement of objectives
xiii) The types of personal circumstances which may impact on individual performance
MCI C13.4

Unit PM 51 Manage the performance of teams and individuals - provide feedback to teams and individuals on their performance

Unit Commentary

This Unit is concerned with the competence required to make the best use of a team and its members, so that they can achieve the organisation’s objectives.

In order to provide effective feedback to teams and individuals on their performance, it will be necessary to give regular feedback, based on an objective assessment of their performance. The feedback should acknowledge achievements and provide constructive suggestions and encouragement. At all times there is a need to maintain confidentiality and show respect for the individuals concerned. Opportunities should be made available for them to respond to the feedback and make suggestions on how they could improve their performance.

This Unit requires you to have underpinning knowledge and understanding of:

- Interpersonal skills
- Communication techniques
- Organising and planning techniques
- Counselling techniques
- Problem solving techniques
- Principles of motivation
- Assertiveness techniques

You must be able to:

a) provide feedback to teams and individuals in a situation and in a form and manner most likely to maintain and improve their performance

b) provide feedback that is clear, and is based on your objective assessment of their performance against agreed objectives

c) ensure feedback acknowledges the team members’ achievements

d) ensure the feedback provides the team members with constructive suggestions and encouragement for improving future performance against their work and development objectives

e) ensure the way in which you provide feedback shows respect for individuals and observes the need for confidentiality

f) provide opportunities for the team or individuals to respond to feedback, and to recommend how they could improve their performance in the future
MCI C13.4

Unit PM 51 Manage the performance of teams and individuals - provide feedback to teams and individuals on their performance

Scope:

1 Feedback:
   - Positive
   - Constructive
   - Supportive

2 Communication:
   - Oral
   - Written

3 Times and locations:
   - During normal day-to-day activities
   - Team meetings and briefings
   - Formal appraisals
   - Confidential counselling

Specific knowledge required for this Unit:

i) Communication and presentation techniques
ii) Principles of positive and constructive feedback
iii) Principles of planning feedback meetings
iv) How to develop mutual respect in the team through feedback
v) How to motivate team members and gain their commitment
vi) Roles and responsibilities for providing performance feedback and for maintaining records
vii) The principles of confidentiality
viii) Selecting and using appropriate information
ix) How to gain commitment
x) How team performance can be improve through involving others
Section 3 – Glossary of terms

The terms and definitions below are taken from BS6079 – 2:2000

1. **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.

2. **Budgetary control**
   System of creating budgets monitoring progress and taking appropriate action to achieve budget 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.

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

4. **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.

5. **Commissioning**
   Advancement of an installation from the stage of static completion to full working order and achievement of the specified operation requirements.

6. **Contingency plan**
   Mitigation plan alternative course(s) of action devised to cope with project risks.

7. **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.

8. **Critical path analysis**
   Procedure for calculating the critical path and floats in a network.

9. **Deliverables**
   End-product 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 of these.

10. **Direct costs**
    Costs that are specifically attributable to an activity or group of activities without apportionment.

11. **Early start time**
    Earliest possible time by which an activity can start within the logical and imposed constraints of the network.
12. **Earliest finish time**  
Earliest possible time by which an activity can finish within the logical and imposed constraints of the network.

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

14. **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.

15. **Indirect cost**  
Costs associated with a project that cannot be directly attributed to an activity or group of activities.

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

17. **Milestone**  
Key event, event selected for its importance in the project.  
*Note:* Milestone are commonly used in relation of progress.

18. **Multi-project scheduling**  
Use of the techniques of resource allocation to schedule more than one project concurrently.

19. **Phase (of a project)**  
That part of a project during which a set of related and interlinked tasks are performed.

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

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

22. **Project**  
Unique process, consisting of a set of co-ordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements including constraints of time, cost and resources.

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

24. **Project closure**  
Formal termination of a project at any point during its life.

25. **Project life cycles**  
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.”
26. **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.

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

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

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

30. **Project organisation** Structure that is created or evolves to serve the project and its participants.

31. **Project progress report** Formal statement that compares the project progress, achievements and expectations with the project plan.

32. **Project schedule** Project programme.

33. **Project team** Set of individuals, groups and/or organisations that are responsible to the project manager for undertaking project tasks.

34. **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 utilized 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.

35. **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.

36. **Risk analysis** Systematic use of available information to determine how often specified events may occur and the magnitude of their likely consequences.

37. **Risk evaluation** Process used to determine risk management priorities.


39. **Secondary risk** Risk that can occur as a result of treating a risk.

40. **Sponsor** Individual or body for whom the project is undertaken and who is the primary risk taker.
| 41. | **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. |
| 42. | **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. |
| 43. | **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 task* |

The following additional terms within the Standards not defined within BS6079 – 2:2000 were identified and defined by contributors.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Allowances</td>
<td>Time or costs to cover for poorly defined but identified issues and known future occurrences</td>
</tr>
<tr>
<td>Brief</td>
<td>A high level outline (strategic specification) of stakeholders (customers/clients) needs and requirements for a project. In some sectors may be known as the ‘Project definition’</td>
</tr>
<tr>
<td>Contingencies</td>
<td>Planning for unknowns and unaccountable uncertainties</td>
</tr>
<tr>
<td>Factors</td>
<td>Issues that affect or influence outcomes</td>
</tr>
<tr>
<td>Hazards</td>
<td>Potential sources of harm</td>
</tr>
<tr>
<td>Regulations</td>
<td>Laws (including H&amp;S), international/national standards, regulatory guidelines and codes of practice</td>
</tr>
<tr>
<td>Strategy</td>
<td>Structuring, planning and defining the direction of a project to complete it’s life cycle in order to meet the required objectives</td>
</tr>
<tr>
<td>Technical</td>
<td>The theory, principles and knowledge to be applied to the deliverables (process or product)</td>
</tr>
</tbody>
</table>
Section 4 - Qualification Structures

Project Management - Level 4    p120
Project Management - Level 5    p122
Section 4 – Qualification Structures

Project Management – Level 4

Mandatory units – all eleven units to be completed

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 10</td>
<td>Develop operational objectives for the project</td>
</tr>
<tr>
<td>PM 11</td>
<td>Prepare the specification of requirements</td>
</tr>
<tr>
<td>PM 17</td>
<td>Develop a detailed schedule for the project</td>
</tr>
<tr>
<td>PM 19</td>
<td>Identify perceived risks and evaluate options for their control</td>
</tr>
<tr>
<td>PM 26</td>
<td>Verify contract arrangements are in place</td>
</tr>
<tr>
<td>PM 33</td>
<td>Comply with regulatory requirements</td>
</tr>
<tr>
<td>PM 39</td>
<td>Co-ordinate, monitor and control project schedules</td>
</tr>
<tr>
<td>PM 40</td>
<td>Monitor income and expenditure</td>
</tr>
<tr>
<td>PM 41</td>
<td>Ensure quality in the implementation of the project</td>
</tr>
<tr>
<td>PM 42</td>
<td>Control hand-over of responsibility for the project</td>
</tr>
<tr>
<td>PM 45</td>
<td>Ensure the completion of project activities</td>
</tr>
</tbody>
</table>

Optional Managing units – four (4) to be completed from eleven (11) - duplication of similar units in the shaded sections is not allowed.

PM48 to 51 must be completed for certification as a complete Management Unit (MCI - C13) and count as four units for this award

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 27</td>
<td>Manage the performance of the team - allocating work</td>
</tr>
<tr>
<td>PM 28</td>
<td>Manage the performance of the team - agreeing objectives and work plans</td>
</tr>
<tr>
<td>PM 29</td>
<td>Manage the performance of the team - assessing performance</td>
</tr>
<tr>
<td>PM 30</td>
<td>Manage the performance of the team - providing feedback on the team’s performance</td>
</tr>
<tr>
<td>PM 35</td>
<td>Lead the project team (MCI G5.1)</td>
</tr>
<tr>
<td>PM 37</td>
<td>Develop solutions to project problems (MCI G5.3)</td>
</tr>
<tr>
<td>PM 38</td>
<td>Maintain communication with project stakeholders (MCI G5.4)</td>
</tr>
<tr>
<td>PM 48</td>
<td>Manage the performance of teams and individuals - allocate work to teams and individuals (MCI C13.1)</td>
</tr>
<tr>
<td>PM 49</td>
<td>Manage the performance of teams and individuals - agree objectives and work plans with teams and individuals (MCI C13.2)</td>
</tr>
<tr>
<td>PM 50</td>
<td>Manage the performance of teams and individuals - assess the performance of teams and individuals (MCI C13.3)</td>
</tr>
<tr>
<td>PM 51</td>
<td>Manage the performance of teams and individuals - provide feedback to teams and individuals on their performance (MCI C13.4)</td>
</tr>
</tbody>
</table>
Optional Process/Procedural units – two (2) to be completed from four (4)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 12</td>
<td>Estimate and specify resources required for the project</td>
</tr>
<tr>
<td>PM 14</td>
<td>Develop a work breakdown structure for the project</td>
</tr>
<tr>
<td>PM 15</td>
<td>Specify activities for project schedules</td>
</tr>
<tr>
<td>PM 36</td>
<td>Monitor and adjust activities, resources and plans (MCI G5.2)</td>
</tr>
</tbody>
</table>

Optional Risk units – one (1) to be completed from three (3)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 18</td>
<td>Monitor risks and review the effectiveness of measures for controlling them</td>
</tr>
<tr>
<td>PM 20</td>
<td>Monitor risks and review contingency plans and actions</td>
</tr>
<tr>
<td>PM 47</td>
<td>Identify and analyse hazards and specify actions to control risks to people, property and the environment</td>
</tr>
</tbody>
</table>

Optional Resourcing units – one (1) to be completed from four (4)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 16</td>
<td>Recommend the means of procuring resources for projects</td>
</tr>
<tr>
<td>PM 23</td>
<td>Recommend and agree the type and conditions of contract</td>
</tr>
<tr>
<td>PM 24</td>
<td>Develop contractual arrangements</td>
</tr>
<tr>
<td>PM 25</td>
<td>Review and select tenders</td>
</tr>
</tbody>
</table>

Optional Evaluation units – one (1) to be completed from two (2)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 43</td>
<td>Obtain and evaluate feedback on project performance</td>
</tr>
<tr>
<td>PM 46</td>
<td>Evaluate projects</td>
</tr>
</tbody>
</table>

Note: All the mandatory units must be completed, plus the number of optional units identified as required from each of the groups.
**Project Management – Level 5**

**Mandatory units – all eleven (11) units must be completed**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 1</td>
<td>Develop strategic objectives for the project</td>
</tr>
<tr>
<td>PM 2</td>
<td>Identify and evaluate options for the project</td>
</tr>
<tr>
<td>PM 3</td>
<td>Prepare the business case for undertaking a project</td>
</tr>
<tr>
<td>PM 4</td>
<td>Prepare a project brief</td>
</tr>
<tr>
<td>PM 6</td>
<td>Identify strategic risk and evaluate options for minimising project risk</td>
</tr>
<tr>
<td>PM 13</td>
<td>Develop outline programmes or schedules for projects</td>
</tr>
<tr>
<td>PM 15</td>
<td>Specify activities for project schedules</td>
</tr>
<tr>
<td>PM 32</td>
<td>Review the progress of projects</td>
</tr>
<tr>
<td>PM 33</td>
<td>Comply with regulatory requirements</td>
</tr>
<tr>
<td>PM 34</td>
<td>Review and monitor the financial control of projects</td>
</tr>
<tr>
<td>PM 46</td>
<td>Evaluate projects</td>
</tr>
</tbody>
</table>

**Optional Managing units – four (4) to be completed from nine (9) - duplication of similar units in the shaded sections is not allowed.**

*PM48 to 51 must be completed for certification as a complete Management Unit (MCI - C13) and count as four units for this award*

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 27</td>
<td>Manage the performance of the team – allocating work</td>
</tr>
<tr>
<td>PM 28</td>
<td>Manage the performance of the team – agreeing objectives &amp; work plans</td>
</tr>
<tr>
<td>PM 29</td>
<td>Manage the performance of the team – assessing performance</td>
</tr>
<tr>
<td>PM 30</td>
<td>Manage the performance of the team – providing feedback on the team’s performance</td>
</tr>
<tr>
<td>PM 38</td>
<td>Maintain communication with project stakeholders (MCI G5.4)</td>
</tr>
<tr>
<td>PM 48</td>
<td>Manage the performance of teams and individuals - allocate work to teams and individuals (MCI C13.1)</td>
</tr>
<tr>
<td>PM 49</td>
<td>Manage the performance of teams and individuals - agree objectives and work plans with teams and individuals (MCI C13.2)</td>
</tr>
<tr>
<td>PM 50</td>
<td>Manage the performance of teams and individuals - assess the performance of teams and individuals (MCI C13.3)</td>
</tr>
<tr>
<td>PM 51</td>
<td>Manage the performance of teams and individuals - provide feedback to teams and individuals on their performance (MCI C13.4)</td>
</tr>
</tbody>
</table>
### Optional Process/Procedural units – three (3) to be completed from six (6)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 5</td>
<td>Establish and maintain a culture of risk awareness</td>
</tr>
<tr>
<td>PM 7</td>
<td>Review the effectiveness of measures for controlling risk</td>
</tr>
<tr>
<td>PM 8</td>
<td>Establish the requirements of the project management team</td>
</tr>
<tr>
<td>PM 9</td>
<td>Establish the project team’s working methods and monitor performance</td>
</tr>
<tr>
<td>PM 20</td>
<td>Monitor risks and review contingency plans and actions</td>
</tr>
<tr>
<td>PM 31</td>
<td>Identify and establish procedures and responsibilities for the project</td>
</tr>
</tbody>
</table>

### Optional Resourcing units – one (1) to be completed from three (3)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 21</td>
<td>Ensure the means of securing the required project resources are in place</td>
</tr>
<tr>
<td>PM 22</td>
<td>Select and agree a procurement strategy and procedure(s)</td>
</tr>
<tr>
<td>PM 23</td>
<td>Recommend and agree the type and conditions of contract</td>
</tr>
</tbody>
</table>

### Optional Evaluation units – one (1) to be completed from three (3)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 43</td>
<td>Obtain and evaluate feedback on project performance</td>
</tr>
<tr>
<td>PM 44</td>
<td>Promote and protect planned work</td>
</tr>
<tr>
<td>PM 45</td>
<td>Ensure the completion of project activities</td>
</tr>
</tbody>
</table>

*Note: All the mandatory units must be completed, plus the number of optional units identified as required from each of the groups.*
Section 5 – Assessment Strategy for Project Management NVQs/SVQs

1. Introduction

1.1 The cross-sectoral Standard setting group (under the auspices of the ECITB) in partnership with the existing Awarding Body Forum for the awards (currently made up of five Awarding Bodies) and other stakeholders has prepared this assessment strategy to accompany the updated Project Management Standards.

1.2 The strategy outlines the requirements for the assessment of competence. This includes assessment for the purposes of nationally accredited vocational qualifications (NVQs/SVQs) and units.

1.3 Project Management has relevance across many sectors of business and industry with projects varying considerably in duration, size and cost. Candidates can therefore be operating domestically, Nationally or Internationally, and it is therefore essential that the Assessment process is relevant to the business and the sector in which they are operating.

1.4 The Standard setting group has established the requirements for:

i) enhanced external quality control

ii) Standards that must be assessed against workplace evidence and performance

iii) the areas, use and terms for simulation

iv) the competence requirements of Assessors and Verifiers

2. Enhanced Quality Control and Assessment

2.1 After consultation with the sectors and the Awarding Bodies it was concluded that it would be neither cost-effective nor beneficial to adopt the approaches outlined in Appendix A as a mandatory part of the strategy for enhancing quality control.

2.2 Awarding Bodies through the quality control mechanisms, specified within the NVQ Code of Practice and the SQA Criteria document (Implementing SVQs - A Guide to Awarding Bodies), must ensure rigorous and effective control of centres and the assessment processes so that judgement of what is valid, authentic, current, reliable and sufficient evidence is maintained across all assessment contexts. To ensure consistency and integrity of assessment it is required that all Awarding Bodies routinely participate in meetings of an Awarding Body Forum which shall continue to be the focus for ensuring that assessment of competence is conducted in a fair and consistent manner.
2.3 The Awarding Body Forum will be expected to support a common understanding of the Standards and promote the best assessment practice by the Awarding Bodies working together to:

i) establish and maintain a common guide to appropriate types and amounts of performance evidence for the units.

ii) draft and maintain a specification of basic knowledge issues to be addressed for the units.

iii) agree to carry out 100% External Verification of two (2) mandatory units (PM 11 & PM 40) for the level 4 award, and two (2) mandatory units (PM 3 & PM 32) for the level 5 award, and also to agree an outline sampling plan for the remaining units in the awards.

iv) contribute to cross Awarding Body standardisation activities.

v) ensure effective systems are in place and managed to confirm occupational competence of Assessors and Verifiers.

vi) collate and report on take up, promotional activities, successes and areas of difficulty.

2.4 The Awarding Bodies are required to define and maintain comprehensive guidance for the external verification of assessment procedures, processes and outcomes. Specific elements to be included are:

i) The Awarding Body verification systems must ensure that the External Verifier sample of the evidence represents a sufficiently accurate picture of assessment in the centre to be confident that those decisions not sampled would also meet the National Standards.

ii) External Verifiers should support centres in developing Internal Verification practices in line with good practice outlined in the Joint Awarding Bodies Guidance on Internal Verification.

iii) External Verifiers must require centres to submit details of assessment planning arrangements and assessment recording forms and systems. Submitted information must include information on the planned use and design of simulations and the External Verifier must be satisfied that these accord with the recommendations on the acceptability and use of simulation given later in this strategy.
3. Assessment of performance in the workplace

3.1 Other than as indicated in section 4 below, all evidence of competence must reflect activity undertaken by the candidate in the workplace.

3.2 Candidates should be encouraged to make effective use of all available opportunities for evidence collection in line with the following principles:

   i) evidence must be valid, in that it meets the requirements of the Standard and is capable of being authenticated as the candidate’s own work, or having the responsibility and authority for its acceptance and it meeting the Standard.

   ii) where the scale, diversity, complexity and duration of projects from which candidates can derive evidence is limited, evidence from a single project using a combination of significant components within it may be sufficient; evidence from a range of projects is preferable.

   iii) assessors should pay due regard to the cost-effectiveness of using varied sources of evidence when planning assessments with a candidate.

3.3 As a guide a ‘project’, in the context of this qualification or units within it, is likely to have most if not all of the following attributes:

   i) it will have individual, original and unique features that are novel to its management and is unlikely to be of a repetitive nature

   ii) it will involve risk and uncertainty and may be influenced by external events outside the project manager’s direct control

   iii) it will be approved against commitments to deliver specified, qualified and quantified results within stated quality and technical parameters

   iv) authorisation will require results to be delivered within a specified time frame (stated start–end dates), resource and cost constraints

   v) the project will usually involve a team nominated from across a range of disciplines and

4. Acceptability and use of simulation

4.1 The use of simulation as a means of assessing competence is only acceptable in relation to those few instances where one or more of the following characteristics apply:

   i) Health and safety could be compromised by seeking workplace evidence;

   ii) The behaviour or situation under which assessment occurs happens infrequently in the workplace.

   iii) The responsibility for the work rests with the candidate, but it is usually delegated and they have limited opportunity to demonstrate it

   iv) There would be unacceptable commercial or operational risk in securing workplace assessment.

   v) Facilities need to be placed in an unacceptable operating state to allow for assessment to take place.
Specific units for which simulation is permitted are PM3; 14; 15; 24; 25; 26; 37 & 44

4.2 Where simulation is permitted, it must have the following characteristics:

For all simulations, the simulated activity must be designed to reflect the activity as it would be carried out in a workplace environment, including:

i) The presence, actions and capabilities of other interacting personnel.

ii) The urgency with which the activity must be carried out and the time needed to complete it

iii) The number and sequence of actions needed to complete the activity

iv) The number and complexity of the factors affecting the activity

v) The skills and knowledge needed to carry out the activity

vi) The nature and availability of resources needed to carry out the activity

vii) Access to references and sources of advice and assistance that could be needed if problems arise

viii) The type of documentation to be completed

ix) The standards to which the activity must be carried out, including any practices and procedures which must be followed

x) The outcomes which the activity will produce

4.3 Centre proposals for the use of simulation should be approved by the Awarding Body in advance of being used and may be rejected if they fail to comply with the characteristics listed above.

5. Requirements for assessors

5.1 Assessors are responsible for assessing candidates’ performance against the relevant Occupational Standards. Therefore, they must have had recent and relevant experience of performing the competences under review. They must also have a thorough technical knowledge of what constitutes effective performance and best working practices in the context in which the assessment is to take place. It is unlikely that an individual of less than two years experience in the relevant sector would have sufficient occupational or vocational competence to be an effective assessor.

5.2 In addition, Assessors must have achieved ENTO Unit D32 Assess candidate performance and ENTO unit D33 Assess candidate using differing sources of evidence or have a clear action plan for their achievement. Where an assessor is still working towards the relevant ENTO unit(s), an Assessor qualified in the units must support the final judgement about candidate performance.

1 Or the replacement Standards Setting Body and equivalent unit(s)
5.3 Assessors must be able to demonstrate a working knowledge of the relevant National Occupational Standards, as well as the Awarding Body’s and Approved Centre’s systems and procedures.

5.4 There may be a requirement to use more than one assessor per candidate to cover the full award. Awarding bodies must confirm and audit Centre arrangements and ensure the co-ordination and cohesion of the assessment process.

6. **Requirements for Internal Verifiers**

6.1 Internal Verifiers should have direct experience or substantial knowledge of the occupational area for which they are responsible for verifying assessment procedures and decisions. Internal Verifiers must have achieved ENTO Unit D34 Internally verify the assessment process, and preferably Units D32 Assess candidate performance and D33 Assess candidate using differing sources of evidence or have a clear action plan for their achievement. Where an Internal Verifier is still working towards the relevant ENTO unit(s), an Internal Verifier qualified in the units must support their final judgement.

6.2 Internal Verifiers must be able to demonstrate a thorough working knowledge of the revised Occupational Standards for Project Management, the Awarding Body’s and Approved Centre’s systems and procedures and the ability to work effectively with both assessors and candidates. Where an Internal Verifier has only limited occupational or vocational expertise, mechanisms must be in place for supporting assessors with occupational related decisions. It is essential that Internal Verifiers should have no direct involvement in the assessment of candidates for the unit(s) they are verifying.

7. **Requirements for External Verifiers**

7.1 External Verifiers must have achieved, or be working towards gaining within the required timeframe the ENTO unit D35 Externally Verify the assessment process. It is preferable that they also have ENTO units D32 and D33 Assessors, as well as the D34 Internally Verify the assessment process. Where an External Verifier is still working towards the relevant ENTO unit(s), a Verifier qualified in the relevant units must support their final judgements. External Verifiers must possess effective communication and interpersonal skills.

7.2 External Verifiers should have a thorough working knowledge of the revised National Occupational Standards, the Accrediting Bodies guidance on the implementation of NVQs/SVQs, the Awarding Body’s systems and procedures and quality assurance operating procedure.

1 Or the replacement Standards Setting Body and equivalent unit(s)
7.3 Where an External Verifier has only limited vocational expertise, mechanisms must be in place for supporting Assessors and Internal Verifiers with occupational related decisions. Such supporting individuals must not have been involved with the assessments concerned.

8. **Confirmation of Competence**

8.1 Awarding bodies need to have in place effective systems for confirming the occupational/vocational competence of assessors and verifiers. The systems for recruitment and monitoring must be capable of balanced and objective decisions, using evidence from academic and vocational qualifications, balanced against breadth and length of experience from the workplace.

Appendix A

After consultation with the sectors (NTOs) and the Awarding Bodies it was concluded that it would be neither cost-effective nor beneficial to adopt the following approaches to external quality control as a mandatory part of the strategy. This does not exclude Awarding Bodies using them where they have mechanisms in place and wish to adopt them as a means of enhancing quality.

**Use of independent assessors (moving the candidate)**
The variation in business sector needs and techniques involved would make the use of test centres impractical, unrealistic and expensive in assessing candidate achievement.

**Use of independent assessors (moving the assessor)**
The spread of candidates, small numbers per centre and the need for a spread of business sector occupationally competent peripatetic assessors would be very costly. It could create difficulties in finding and allocating assessors with suitable experience who are available to travel to the required locations.

**Use of independent assessment methods (open written response assessment)**
Given the variation in technologies it would be difficult to generate assessment instruments that could be administered and marked in a cost-effective, reliable and consistent manner.

**Use of independent assessment methods (multiple choice tests)**
Given the wide variation in business and sector requirements, there would be low confidence in the validity and reliability of multiple choice testing in such assessments. **Section 6 – Signposting of Key and Core Skills**
Section 6 - Signposting of Key and Core Skills

Signposting of Key Skills  p132
Signposting of Core Skills  p134
Signposting of Key Skills

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
<th>Communication</th>
<th>Application of Number</th>
<th>Information Technology</th>
<th>Working with others</th>
<th>Improving own learning &amp; performance</th>
<th>Problem solving</th>
<th>Personal skills development</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 1</td>
<td>Develop strategic objectives</td>
<td>C4</td>
<td>W4</td>
<td>PS4</td>
<td>KS5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 2</td>
<td>Evaluate options</td>
<td>C4</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PM 3</td>
<td>Prepare the Business Case</td>
<td>C4</td>
<td>N4</td>
<td>W4</td>
<td>IL4</td>
<td>PS4</td>
<td>KS5</td>
<td></td>
</tr>
<tr>
<td>PM 4</td>
<td>Prepare a project brief</td>
<td>C4</td>
<td>W4</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PM 5</td>
<td>Establish and maintain a culture of risk awareness</td>
<td>C4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PM 6</td>
<td>Identify strategic risk and evaluate options for minimising project risk</td>
<td>C4</td>
<td>N4</td>
<td>IT3</td>
<td>W4</td>
<td>PS4</td>
<td>KS5</td>
<td></td>
</tr>
<tr>
<td>PM 7</td>
<td>Review the effectiveness of measures for controlling risk</td>
<td>C4</td>
<td>W4</td>
<td>IL4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 8</td>
<td>Establish the requirements of the project management team</td>
<td>C4</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PM 9</td>
<td>Establish the project team’s working methods and monitor performance</td>
<td>C4</td>
<td>W4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 10</td>
<td>Develop operational objectives for the project</td>
<td>C4</td>
<td>W4</td>
<td>IL4</td>
<td>PS4</td>
<td>KS5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 11</td>
<td>Prepare the specification of requirements</td>
<td>C4</td>
<td>N4</td>
<td>W4</td>
<td>IL4</td>
<td>PS4</td>
<td>KS5</td>
<td></td>
</tr>
<tr>
<td>PM 12</td>
<td>Estimate and specify resources required for the project</td>
<td>C4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 13</td>
<td>Develop outline programmes or schedules for projects</td>
<td>C4</td>
<td>N4</td>
<td>IT3</td>
<td>W4</td>
<td>KS5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 14</td>
<td>Develop a work breakdown structure for the project</td>
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<td>IT3</td>
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### Signposting of Core Skills

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<th>Information Technology</th>
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<td>Manage the performance of teams and individuals - provide feedback to teams and individuals on their performance</td>
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