

Unit AB4 Estimate resources and develop programmes

Elements

AB4.1 Specify and estimate resources required for the project

AB4.2 Develop programme and schedules for the project

Unit Commentary

This Unit covers the competence of archaeologists to estimate resources and develop programmes for projects. A programme defines the scope of the works and is a scheme worked out to include all the activities needed to achieve the project outcomes, resourced and scheduled.

On large and complex projects the role of the project manager will normally be to direct and verify the activities of specialists and others who will be preparing material at the level of technical detail. On smaller projects or on those that are straightforward, the project manager may well be expected to do all this work themselves.

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AB4.1 Specify and estimate resources required for the project

Performance Required

This will involve:

- a) agreeing the required degree of accuracy in specifying and estimating resources with clients
- b) realistically estimating, justifying and agreeing the **methods, resources** and time needed to achieve the required project outcomes with clients
- c) verifying that resources required for component project activities are estimated and specified accurately, and sufficient information is provided to facilitate their acquisition
- d) verifying that assumptions on which estimates are based, qualifications and sources are clearly stated
- e) verifying that contingent allowances are clearly identified and are related to comparable experience
- f) ensuring that where adjustments in costs are requested by clients, the consequences are accurately assessed and clients advised
- g) ensuring that estimated resources are consistent with the successful achievement of project outcomes
- h) clearly explaining resource estimates to clients and indicating they meet the specification of requirements

Occupational Context Statement

1 Methods (related to):

- desk-based studies
- field investigations of sites and landscapes
- intrusive
- non-intrusive
- conservation
- artefact studies
- interpretive projects
- educational projects

2 Resources:

- people
- materials
- data
- finance
- equipment
- facilities
- information systems

Knowledge Requirements

You need to know and understand how to:

- Use proprietary spread-sheet packages

You need to know about:

- Order of magnitude estimating - purposes and limitations
- Time/cost/quality relationships
- Direct costs / indirect costs / allowances
- Methods of increasing accuracy of costs and estimates
- Sources of information about good current practice in estimating
- Means of obtaining budget estimates from others
- Methods of determining which areas of estimates have most influence on accuracy of total estimate
- Means of specifying resources in the categories of: finance, human resources; materials; facilities; information

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AB4.1 Specify and estimate resources required for the project

Required Skills

You should demonstrate:

- How to budget
- How to schedule
- That estimated resources are consistent with successful achievement of project outcomes
- How to communicate resource estimates to clients
- How to obtain budget estimates from others
- The use of spread-sheet packages

Evidence Required

You should provide evidence that you can specify and estimate resources required for the project that includes:

- agreement on degree of accuracy required
- estimation of time and cost of preparing specifications and estimates
- methods used for estimating
- specifications of types of resources related to component activities in work breakdown structure
- assumptions made, estimates qualified and sources of estimates
- contingencies provided for
- adjustments requested by client
- estimates presented to clients

Evidence Rules

- The candidate should have been involved in at least 3 substantive projects submitted for approval

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AB4.2 Develop programme and schedules for the project

Performance Required

This will involve:

- a) agreeing the required **degree of accuracy** of the programme and schedules with clients
- b) estimating, justifying and agreeing with clients the resources and time needed to achieve the required outcomes of the project and schedules
- c) verifying that programme **links** between component activities are correctly identified
- d) where reductions in duration are requested by clients, analysing scope for changes to identify the most significant areas for reduction
- e) verifying that schedules are mutually compatible with impinging programmes
- f) agreeing programme with clients in a manner conducive to their continuing support

Occupational Context

1 Degree of accuracy:

- related to requirements for control of resources
- compliance with project objectives
- compliance with external factors (legal, regulatory, funding)

2 Links:

- chronological
- inter-dependence
- hierarchical

Knowledge Requirements

You need to know and understand how to:

- Deal with uncertainty
- Schedule resources - determined by demand

You need to know about:

- Methods of preparing and structuring programmes and schedules
- Significance of terms used in planning and scheduling
- Dependencies and restraints between starts and ends of activities
- Proprietary computer based planning tools

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AB4.2 Develop programme and schedules for the project

Required Skills

You should demonstrate:

- How to work with clients and colleagues to achieve agreed ends
- How to budget
- How to schedule
- How to justify and verify methods used for budgeting and scheduling
- The use of computer planning tools

Evidence Required

You should provide evidence that you can develop programme and schedules for the project that includes:

- estimates of costs involved in programming
- choices of planning tools and methods
- project programmes and component activity schedules
- links between programmes, schedules and work breakdown structure
- clients changes accommodated
- final project programme

Evidence Rules

- The candidate should have been involved in at least 3 substantive projects submitted for approval