



Australian Government

Department of Education, Employment and Workplace Relations

AHCNRM507A Manipulate and analyse data within geographic information systems

Release: 1

AHCNRM507A Manipulate and analyse data within geographic information systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit relates to extracting, comparing and manipulating data in response to customer requests.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop procedures for manipulation and analysis of data	1.1.Desired data format is specified and based on job requirements. 1.2.Parameters are specified for manipulation of the data sets. 1.3.New procedures are documented clearly explaining the procedure and rationale for development.
2. Establish models required to provide outcome	2.1.Applicability of existing tools, models, theories, applications and solutions is evaluated. 2.2.Feasible parameters, equations and assumptions are specified. 2.3.Models required to provide specified outcome are established.
3. Analyse data	3.1.Steps to be undertaken to analyse and manipulate data are specified. 3.2.Source data limitations and other restricting factors are taken into account when selecting techniques for analysis. 3.3.Data is isolated and retrieved from its source. 3.4.Data is interrogated to ensure reliability. 3.5.Data is prepared for presentation media.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysing options
- using tools within software to manipulate data
- reading external data sets into data model
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of

REQUIRED SKILLS AND KNOWLEDGE

cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- database structures
- scripting and commands
- line instructions and programming
- operating systems:
 - UNIX
 - DOS
 - Windows
 - NT
- range of tools, models, theories, applications and solutions
- data analysis and manipulation techniques.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- suitable procedures are developed
- new procedures are documented
- appropriate models are used and/or created.

Context of and specific resources for assessment

On the job or in a simulated work environment.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Customer may include:

- internal
- external.

Factors may include:

- time
- command line operation
- menu drivers options.

Source data limitations may include:

- currency
- structure
- accuracy

RANGE STATEMENT

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| | <ul style="list-style-type: none">• source of data. |
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Unit Sector(s)

Unit sector	Natural resource management
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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