



Australian Government

LGAPLEM512A Provide geographic information systems data

Revision Number: 2

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Modification History

LGAPLEM512A Release 2: Layout adjusted.

LGAPLEM512A Release 1: Primary release.

Unit Descriptor

This unit covers developing and applying data management and analytical tools to produce specified outcomes.

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.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Analyse request to develop solution	1.1 Specific problem or question is clarified in consultation with <i>end user</i> to establish <i>end result specifications</i> . 1.2 Information required to achieve result is defined and required <i>data</i> sets are correctly determined.
2 Assess data availability	2.1 Availability of required data sets is ascertained through research of <i>internal</i> and <i>external sources</i> . 2.2 Custodianship of data is confirmed and access and pricing are determined. 2.3 Data is obtained in line with <i>industry standards</i>, statutory requirements and council policy. 2.4 Where appropriate, <i>procedures</i> are developed to capture data.
3 Assess data quality	3.1 Data is assessed for <i>integrity</i> to determine suitability for task. 3.2 Disparities between data sets are investigated and resolved to ensure integrity of data used.
4 Run standard query	4.1 Appropriate standard query is selected. 4.2 Selected query is run to achieve required outcome .
5 Validate outcome	5.1 Appropriate data validation procedures are determined. 5.2 <i>Outcome</i> is validated in line with predetermined procedures. 5.3 Procedures to refine model or analytical procedures are developed. 5.4 End user is consulted regarding suitability of outcome and amendments are negotiated as necessary.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- analysing options
- researching and accessing information
- attention to detail
- negotiating with customers

Required Knowledge

- database structures
- scripting and commands
- line instructions and programming
- operating systems
- SQL or other generic query language
- relationship of spatial features of database
- specific geographic information systems software, such as Genamap, MapInfo or ArcInfo
- potential inaccuracies and problems
- internal and external policies and practices relating to custodianship of data, pricing and access including industry standards, statutory requirements and council policies
- legislation relating to trade practices, copyright, intellectual property, local government acts, roads act and freedom of information legislation.
- UNIX
- DOS
- Windows
- NT

Evidence Guide

Overview of assessment requirements	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 of evidence to be considered	The demonstrated ability to: consider integrity of data ensure end result meets customer needs, including time frames.
Context of assessment	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria applicable to the workplace environment, within the scope of the Range Statement.
Method of assessment	The following assessment methods are suggested: • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence should be gathered over a period of time in a range of actual or simulated management environments.
Resource implications	Access to a workplace or simulated case study that provides the following resources: • relevant hardware and software such as geographic information systems, CAD, desktop publishing, desktop mapping, spreadsheets, word processing, multimedia, graphic animation, plotters, printers and terminals

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 in the Performance Criteria is detailed below.

- End users*** may be:
- council departments
 - residents and rate payers
 - real estate agents
 - general public
 - council management
 - elected members
 - state and federal departments
 - neighbouring councils
 - bus companies
 - statutory bodies including land titles office
 - land information council
 - utilities
- End result specification*** may include:
- graph
 - map
 - table
 - equations
 - parameters
- Data*** may include:
- graphical
 - spatial
 - textual
 - hard copy and paper documents, including work registers, rate books, plans and maps
 - computer records using applications programs (databases, spreadsheets and accounting packages) relating to physical or virtual features, including council assets, community facilities, demographic data, census data, property ownership, property boundaries, zonings, organisations, rateable land, dog ownership, bus routes, property classifications, utilities and services and council facilities
- External sources of data sets*** may include:
- other councils
 - water authority
 - telecommunications industry
 - gas authority
 - electricity authority
 - land titles office
 - valuer general
 - private industry
 - land information council

- street directory companies
 - surveys
 - orthophotography
 - old plans
 - rates books
 - deeds books
 - transaction books
 - surveys
 - aerial photographs
 - protocols
 - de facto standards
 - confidentiality
 - privacy
 - command lines
 - SQL or other generic query language
 - scripts
 - programming language
 - accuracy
 - quality, which may be affected by age or condition of hard copy documents
 - currency
 - completeness
 - resolution
 - confidence limits
 - scale
 - information for external or internal client
 - creation of map layer
 - building up elements of database
- Internal sources of data sets*** may include:
- Industry standards*** may include:
- Procedures for manipulation of data sets*** may include:
- Integrity of data*** may include:
- Outcome*** may include:

Unit Sector(s)

Planning