



Australian Government

Department of Education, Employment and Workplace Relations

CPPSIS5029A Determine suitable information sources to create new spatial datasets

Release: 1

CPPSIS5029A Determine suitable information sources to create new spatial datasets

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to investigate and determine suitable sources of information for the creation of new spatial datasets. It requires the ability to apply wide-ranging specialised technical, creative and conceptual skills. It also requires a broad knowledge of spatial datasets and accountability for personal and group outcomes. Functions would be carried out within organisational guidelines.

Application of the Unit

Application of the unit

This unit of competency supports high-level project management activity in the spatial information services industry sector. It requires the application of planning, organisational, high-level communication, negotiation and problem-solving skills; the ability to demonstrate initiative and enterprise; interpreting technical documentation; and an understanding of technology. The skills and knowledge acquired upon completion of this unit would support the needs of employees in surveying, cartography, town planning, mapping and geographic information systems.

While no licensing, legislative, regulatory or certification requirements apply holistically to this unit at the time of publication, relevant federal, and state or territory legislation, regulations and codes of practice impact upon this unit (see unit performance criteria and range statement).

Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills The required outcomes described in this unit of competency contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged, will assist in identifying employability skills requirements.

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 required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Identify potential sources of spatial data.

- 1.1 Extent, content, intended use, accuracy, precision and format of required spatial datasets are clearly identified from the specifications provided by the **suppliers of spatial data**.
- 1.2 A search is undertaken via a **range of media** to identify sources of information.
- 1.3 **Metadata** for potential spatial datasets is obtained to assist in determining the most appropriate spatial data source.
- 1.4 All potential sources of spatial data are listed according to **organisational guidelines**.
- 1.5 **OHS** issues are considered at all times.
- 1.6 Skills and knowledge are updated to accommodate changes in operating environment and equipment.

2 Assess spatial data availability and suitability.

- 2.1 Spatial datasets are assessed for **suitability** against the specifications.
- 2.2 **Availability** of suitable data is verified with potential suppliers.
- 2.3 **Constraints** on the use of spatial data are assessed against specifications.
- 2.4 Sample data is obtained and assessed to further ensure its suitability, where required.
- 2.5 Maintenance requirements are determined to ensure currency.

3 Document spatial data assessment.

- 3.1 A written assessment of data availability including cost, licensing conditions and constraints on use is completed according to organisational guidelines.
- 3.2 A written assessment of the suitability of available data, including comparison with quality, accuracy, standards and format requirements is completed according to organisational guidelines.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills:

- ability to relate to people from a range of social, cultural and ethnic backgrounds

REQUIRED SKILLS AND KNOWLEDGE

and with a range of physical and mental abilities

- communication skills to:
 - consult effectively with clients and colleagues
 - impart knowledge and ideas through oral, written and visual means
- computer skills (high technical user level) to develop business documentation
- literacy skills to:
 - assess, develop and use workplace information
 - locate and interpret legislation and other written documentation
 - prepare and manage documentation and information flow
 - read and write key performance reports, including technical reports
 - research and evaluate (high level)
- numeracy skills to:
 - estimate costs
 - analyse errors
 - conduct image analysis
 - interpret and analyse statistics
 - record with accuracy and precision
 - undertake computations
- organisational skills to:
 - coordinate technical and human resource inputs to research activities
 - prioritise activities to meet contractual requirements
- project management skills
- self-management skills
- spatial skills to:
 - exercise precision and accuracy in all spatial operations
 - perform spatial data archival and retrieval and train others in this task
 - perform spatial data management and manipulation and train others in this task
 - perform file management and train others in this task
 - solve problems relating to height, depth, breadth, dimension, direction and position in actual operational activity and virtual representation
 - understand implications of height, depth, breadth, dimension and position to actual operational activity and virtual representation
- time management skills.

Required knowledge and understanding:

- data quality integrity
- existing spatial datasets and dataset sources
- information management
- metadata

REQUIRED SKILLS AND KNOWLEDGE

- organisational policies and guidelines, such as OHS guidelines
- relevant legislative, statutory and industry requirements and standards
- resource management processes
- risk analysis principles
- spatial data formats, handling and structure
- spatial referencing systems
- working within budgetary constraints.

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, the range statement and the Assessment Guidelines for this Training Package.

Overview of assessment

This unit of competency could be assessed on its own or in combination with other units relevant to the job function, for example unit CPPSIS5006A Integrate spatial datasets.

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

A person who demonstrates competency in this unit must be able to provide evidence of:

- understanding copyright and ownership constraints
- determining data requirements
- evaluating suitability of available data against project specifications
- identifying sources of data.

Specific resources for assessment

Resource implications for assessment include access to:

- assessment instruments, including personal planner and assessment record book
- assignment instructions, work plans and schedules, policy documents and duty statements
- registered training provider of assessment services
- relevant guidelines, regulations and codes of practice
- suitable venue and equipment.

Access must be provided to appropriate learning and assessment support when required.

Where applicable, physical resources should include equipment modified for people with disabilities.

Context of assessment	Holistic: based on the performance criteria, evidence guide, range statement, and required skills and knowledge.
Method of assessment	Demonstrated over a period of time and observed by the assessor (or assessment team working together to conduct the assessment). Demonstrated competency in a range of situations, that may include customer/workplace interruptions and involvement in related activities normally experienced in the workplace. Obtained by observing activities in the field and reviewing induction information. If this is not practicable, observation in realistic simulated environments may be substituted.
Guidance information for assessment	Assessment requires that the clients' objectives and industry expectations are met. If the clients' objectives are narrowly defined or not representative of industry needs, it may be necessary to refer to portfolio case studies of a variety of spatial information services requirements to assess competency. Oral questioning or written assessment and hypothetical situations (scenarios) may be used to assess underpinning knowledge (in assessment situations where the candidate is offered a preference between oral questioning or written assessment, questions are to be identical). Supplementary evidence may be obtained from relevant authenticated correspondence from existing supervisors, team leaders or specialist training staff. All practical demonstration must adhere to the safety and environmental regulations relevant to each State or Territory. Where assessment is for the purpose of recognition (recognition of current competencies [RCC] or recognition of prior learning [RPL]), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time. In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Assessment processes will be appropriate to the language and literacy levels of the candidate and any cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

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 in the performance criteria is detailed below. Add any 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.

Suppliers of spatial data may include:

- brokers
- government agencies
- internal suppliers
- private suppliers.

Range of media may include:

- computer-based storage
- internet spatial data directories
- service authorities' indexes
- supplier catalogues.

Metadata may include:

- summarised information about a spatial dataset that describes the characteristics of the dataset, including:
 - availability
 - conditions of use
 - coordinate system
 - currency
 - date of acquisition
 - quality
 - source
 - spatial data acquisition methodologies
 - version control.

Organisational guidelines may include:

- code of ethics
- company policy
- legislation relevant to the work or service function, including equal employment opportunity (EEO)
- manuals
- OHS policies and procedures
- personnel practices and guidelines outlining work roles and responsibilities.

OHS may include:

- Australian standards
- development of site safety plan
- identification of potential hazards
- inspection of work sites

- Suitability*** may include:
- training staff in OHS requirements
 - use of equipment and signage.
 - assessment of whether the spatial data will meet the required specification of:
 - accuracy
 - completeness
 - coverage
 - density
 - logical consistency.
- Availability*** includes:
- assessment of whether the spatial data can be obtained and used for client requirements.
- Constraints*** may include:
- administrative
 - copyright
 - financial
 - legal and legislative
 - technical limitations.

Unit Sector(s)

Unit sector	Spatial information services
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