



Australian Government

CPPSIS5040 Interpret and collate spatial data

Release: 1

CPPSIS5040 Interpret and collate spatial data

Modification History

Release 1.

Replaces superseded equivalent CPPSIS5040A Collate and interpret spatial data.

This version first released with CPP Property Services Training Package Version 3.

Application

This unit of competency specifies the outcomes required to interpret and collate spatial data to meet project deliverables and client requirements. The unit covers accessing, querying and interpreting spatial data from various sources to test and determine its relevance and compatibility for meeting project requirements. It also covers collating spatial data and facilitating links with other functional areas within the organisation as part of the broader knowledge management system. The unit requires the ability to use various technologies and software applications, including geographic information system (GIS) software to access, manipulate, archive, retrieve and validate spatial data. It also requires the ability to complete records and documentation.

The unit supports those who work in a lead role in a surveying or spatial information services team in areas such as surveying, cartography, town planning, mapping and GIS.

No licensing, legislative, regulatory, or certification requirements apply to this unit of competency at the time of endorsement.

Pre-requisite Unit

Nil

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.				
1. Access spatial data.	<table><tr><td>1.1.</td><td>Project spatial data requirements and constraints, and client requirements, are identified and documented in consultation with <i>appropriate persons</i>.</td></tr><tr><td>1.2.</td><td>Spatial datasets are retrieved from data storage and other relevant sources and new data is captured according to</td></tr></table>	1.1.	Project spatial data requirements and constraints, and client requirements, are identified and documented in consultation with <i>appropriate persons</i> .	1.2.	Spatial datasets are retrieved from data storage and other relevant sources and new data is captured according to
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1.2.	Spatial datasets are retrieved from data storage and other relevant sources and new data is captured according to				

- project and organisational requirements.
- 1.3. Data is manipulated into appropriate format to meet project requirements.
2. Query and interpret spatial data.
 - 2.1. Data is queried and interpreted using appropriate equipment and software application according to project requirements.
 - 2.2. Data is verified for integrity and relevance using industry-accepted statistical tests and methods according to project requirements.
 - 2.3. Irregularities are identified and resolved, and results recorded and documented according to organisational requirements.
 3. Collate spatial data.
 - 3.1. Spatial data is collated according to organisational requirements.
 - 3.2. Most appropriate format and database for spatial data are selected according to organisational requirements.
 4. Validate spatial data.
 - 4.1. Tools for testing validity of information and data are identified, accessed and used according to organisational requirements.
 - 4.2. Problems with collated data are identified and resolved to ensure quality and usability according to organisational requirements.
 - 4.3. Spatial data is archived and records and documentation are completed according to organisational requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
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Learning skills to: • source spatial data appropriate to client needs.

Numeracy skills to: • interpret and analyse statistics.

Oral communication skills to: • ask questions to clarify client data requirements.

Reading skills to: • analyse detailed technical descriptions of spatial data and its qualifiers.

Technology skills to: • use a computer and software to manipulate spatial data.

Problem-solving skills to: • apply contingency measures to resolve identified errors
• verify authenticity of data against specifications.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

Appropriate persons must include at least two of the following:

- client
- end user
- manager
- qualified surveyor
- spatial data provider
- supplier.

Unit Mapping Information

CPPSIS5040A Collate and interpret spatial data

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSIS5040 Interpret and collate spatial data

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Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria, foundation skills and range of conditions of this unit. The person must also interpret and collate spatial data that meets client requirements for two different projects.

While interpreting and collating the above spatial data, the person must:

- establish project and client requirements for new spatial data
- acquire spatial data from a range of industry-accepted sources
- comply with organisational requirements for:
 - communicating with clients and spatial data providers
 - completing documentation
 - facilitating information and knowledge management processes
 - working safely when using screen-based equipment
- comply with legal requirements relating to client service provision, and accessing and managing spatial data
- exercise precision when retrieving, managing, manipulating and archiving spatial data
- manipulate and analyse geographic information system (GIS) data using GIS software
- query and interpret spatial data using databases
- use industry-accepted methods for assessing validity and integrity of spatial data and resolving errors
- use one of the following statistical tests and methods to verify relevance of data:
 - broad analytical studies to determine estimates of risk
 - making comparisons using basic tests of significance
 - mean, standard deviation, regression analysis and percentage change.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- industry-accepted sources of spatial data, including photogrammetry, remote sensing, terrestrial survey and hydrography
- key features of coordinate reference systems

- GIS software, including ArcInfo, GenaMap and MapInfo
- industry-accepted standards and methods for assessing, verifying and validating spatial datasets and dataset sources
- legal requirements for accessing, storing, retrieving and archiving digital and hard copy spatial data, including data privacy and information copyright
- line instructions and programming for geographical information systems data
- organisational requirements relating to:
 - work health and safety
 - client service
 - information and knowledge management
 - completing documentation
- purpose and use of metadata, including:
 - availability
 - conditions of use
 - coordinate system
 - currency
 - custodian
 - data accuracy
 - data description
 - date of acquisition
 - licence
 - quality
 - source
 - spatial data acquisition methodologies
 - version control
- types of spatial data storage technologies
- key features of spatial reference systems
- statistical tests and methods used to verify relevance of spatial data
- techniques for manipulating datasets using:
 - command lines
 - general query language, such as structured query language (SQL)
 - programming language
 - scripts
- techniques for operating, querying and browsing spatial databases.

Assessment Conditions

The following must be present and available to learners during assessment activities:

- equipment:
 - computer with software appropriate for spatial data management and electronic communication

- printer
- specifications:
 - organisational policies and procedures relating to:
 - work health and safety
 - data privacy and information copyright
- physical conditions:
 - access to equipped work station
- relationships with team members and supervisor:
 - working in a team.

Timeframe:

- as specified by client and project requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

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