

Draft 0.1

This is a draft update to CPPSIS5040 Interpret and collate spatial data:

<https://training.gov.au/Training/Details/CPPSIS5040>.

Code changed to CPPSUR5040.

Changed PCs to active voice.

Changed 'person' to 'candidate' in PE.

Reference to: 'two different projects' in first sentence of PE may be problematic at audit as no specific details provided

Range of Conditions added to Knowledge Evidence.

I've added mapping info.

TAG will need to reassess this as unit is redeveloped.

Unit of Competency

CPPSUR5040 Interpret and collate spatial data

Modification history

Release	Comments
1	Replaces superseded equivalent CPPSIS5040A Collate and interpret spatial data. This version first released with CPP Property Services Training Package Version 3.
	Replaces superseded equivalent CPPSIS5040 Interpret and collate spatial data

Application

This unit specifies the skills and knowledge 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 publication.

Prerequisite Unit

None

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

1. Access spatial data.	<ul style="list-style-type: none">1.1 Identify and document project spatial data requirements, constraints, and client requirements, in consultation with appropriate persons.1.2 Retrieve spatial datasets from data storage and other relevant sources and capture new data according to project and organisational requirements.1.3 Manipulate data into appropriate format to meet project requirements.
2. Query and interpret spatial data.	<ul style="list-style-type: none">2.1 Query and interpret data using appropriate equipment and software application according to project requirements.2.2 Verify data for integrity and relevance using industry-accepted statistical tests and methods according to project requirements.2.3 Identify and resolve irregularities, and record and document results according to organisational requirements.
3. Collate spatial data.	<ul style="list-style-type: none">3.1 Collate spatial data according to organisational requirements.3.2 Select most appropriate format and database for spatial data according to organisational requirements.

4. Validate spatial data.	4.1 Identify, access and use tools for testing validity of information and data according to organisational requirements. 4.2 Identify and resolve problems with collated data to ensure quality and usability according to organisational requirements. 4.3 Archive spatial data and complete records and documentation according to organisational requirements.
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Foundation Skills

Candidates require:

- 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.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS5040 Interpret and collate spatial data

Links

Companion Volume Implementation Guide:

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

Assessment Requirements for CPPSUR5040 Interpret and collate spatial data

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Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by interpreting and collating spatial data that meets client requirements for two different projects.

While interpreting and collating the above spatial data, the candidate 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

To be competent in this unit, a candidate 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
- appropriate persons:
 - client
 - end user
 - manager
 - qualified surveyor
 - spatial data provider
 - supplier.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to:

- 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.

Links

Companion Volume Implementation Guide:

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