

**Draft 0.2**

This is a draft update to CPPSIS5037 Maintain spatial data systems:  
<https://training.gov.au/Training/Details/CPPSIS5037>

No feedback received on this unit.

Range Statement has been removed.  
Changed PCs to active voice.

Changed 'person' to 'candidate' in PE.

## Unit of Competency

### CPPSI5037 Maintain spatial data systems

#### Modification history

Release	Comments
1	Replaces superseded equivalent CPPSI5037A Maintain complex spatial data systems. This version first released with CPP Property Services Training Package Version 3.
	Supersedes and is equivalent to CPPSI5037 Maintain spatial data systems

#### Application

This unit specifies the skills and knowledge required to implement a full cycle of maintenance of spatial data, including updating, backup, recovery and archiving. The unit covers analysing spatial data systems to determine maintenance requirements and constraints; confirming the reliability of spatial data by editing, updating and integrating existing and new spatial data; and problem solving to test and validate data currency and retrieval and backup systems. The unit includes the use of computers and software to manage spatial data, create metadata, and apply spatial data input, output and distribution technologies.

This unit is suitable for skilled surveying technicians and skilled spatial information system (SIS) technicians who use a broad range of cognitive, technical and communication skills to select and apply methods and technologies to analyse information and provide solutions to sometimes complex surveying/spatial information problems. Surveying and spatial information skills are applied in a range of industry contexts including town planning, civil construction, mining, engineering, health, agriculture and defence.

All work must be carried out to comply with workplace procedures, in accordance with relevant State/Territory regulations that govern surveying work as well as work health and safety, regulations and legislation that apply to the workplace.

Cadastral surveying must be undertaken under the supervision of a registered surveyor. Users must check with the relevant regulatory state/territory authority before delivery.

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. Determine data maintenance requirements.	1.1 Identify and document data maintenance objectives and constraints in consultation with appropriate persons. 1.2 Analyse data system to determine components to be maintained according to project objectives. 1.3 Use scripting, queries, macros, networks and remote access when maintaining spatial data systems.
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	1.4 Determine and evaluate maintenance techniques according to enterprise requirements. 1.5 Allocate work to appropriate persons and implement supervisory processes to ensure work is completed within time available.
2. Confirm reliability of spatial data.	2.1 Access and check spatial data updates to confirm accuracy and currency and record relevance according to enterprise requirements. 2.2 Check and edit spatial data to ensure it is compatible and in an acceptable format according to project requirements. 2.3 Maintain integrity and consistency of data according to enterprise requirements.
3. Replace spatial data.	3.1 Edit, prepare and integrate existing and new data according to project requirements. 3.2 Apply error tolerances when manipulating datasets. 3.3 Test and validate spatial datasets to ensure integrity, quality and currency. 3.4 Amend and update documentation according to enterprise requirements.
4. Carry out backup and recovery of spatial data.	4.1 Implement data backups so that data is accessible in contingency situations according to enterprise requirements. 4.2 Test backup system and resolve any problems to confirm that data can be retrieved. 4.3 Manage contingencies to recover data according to enterprise requirements.
5. Archive spatial data.	5.1 Check spatial dataset to be archived for completeness and manipulated where necessary. 5.2 Create metadata according to enterprise requirements. 5.3 Store archived spatial data in a secure location and record details according to enterprise requirements.

### Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

### Unit Mapping Information

Supersedes and is equivalent to CPPSIS5037 Maintain spatial data systems

### Links

The Companion Volume Implementation Guide for the CPP Property Services Training Package is available at <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

## Assessment Requirements for CPPSSI5037 Maintain spatial data systems

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### Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by completing the full cycle of maintenance, updating, backup, recovery and archiving of spatial data systems for two different projects.

While maintaining the above spatial data systems, the candidate must:

- use spatial data input technologies:
  - digitising
  - scanning
  - remote sensing
  - satellite imagery.
- use spatial data output and distribution technologies:
  - scripting
  - query language
  - macro development
  - graphic interfaces
  - networks
  - remote access.

### Knowledge Evidence

To be competent in this unit a candidate must demonstrate knowledge of:

- legal requirements for accessing, storing, retrieving and archiving digital and hard copy spatial data, including data privacy and information copyright
- industry-accepted standards relating to accuracy and precision, error tolerances and metadata
- types of map projections
- key features of coordinate reference systems
- methods for validating test results to identify systematic distortions
- software that can be used to manage spatial data, create metadata, and apply spatial data input, output and distribution technologies
- types of spatial data formats
- query language and graphic interfaces
- advanced spatial data reduction processes
- techniques for using spatial data output and distribution technologies
- types of storage media for a range of spatial data.

### Assessment Conditions

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

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- computer with appropriate software
- hard copy and digital data storage media
- enterprise policies and procedures relating to:
  - work health and safety
  - data privacy and information copyright and licensing.

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